Recommendations for Implementing Fire and Police Protocol Systems for Maine's Public Safety Answering Points

Submitted February 2012 to:

State of Maine
Public Utilities Commission
Emergency Services Communication Bureau

MissionCriticalPartners

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1 EXECUTIVE SUMMARY

1.1 Background

In March of 2011, Mission Critical Partners, Inc. (MCP) delivered its report, *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance,"* to the Public Utilities Commission.

The report made several recommendations intended to reinforce existing Emergency Services Communications Bureau (Bureau) and the Department of Public Safety's (DPS) Maine Emergency Medical Services (MEMS) Bureau Rules, as well as provide a pathway to improved levels of service for Maine's citizens. It made recommendations that suggested specific steps to ensure that existing expectations for PSAPs are met and audited with a minimal impact on existing resources.

The report's recommendations were also based on past efforts to establish best practices, the current state of PSAP operations, as well as the vision of the state's emergency services stakeholders (fire, law enforcement, and emergency medical services providers) to improve the delivery of their respective services.

1.2 Recommendations and Comments From the March 2011 Report

The following represents a narrative description and overview of the recommendations and related comments from the *"Recommendations for Establishing and Maintaining a Quality Assurance (QA) Program Related to PSAP Quality Assurance," report:*

> ***Institutionalizing Processes –*** *In order to expand the existing Emergency Medical Dispatch QA and structured protocol processes already imbedded in state legislation, Bureau and MEMS rules, consideration must be given to the challenges associated to institutionalizing the recommendations supporting the adoption of fire and police protocols and QA processes as suggested in this report. For example, existing resources both at the PSAP as well as the Bureau will require evaluation to more accurately determine where resource and technology shortcomings exist. In order to adopt these recommendations, extra resources will be required. Funding for extra human resources as well as the capitol and operations costs required for program implementation will be a challenge.*
>
> *Moving forward with implementing these processes in state infrastructure will most likely require at least one additional position to oversee the execution of these new programs. The expertise to manage these recommendations exists in the Bureau. However, existing resources will require expansion to achieve these goals. It should be noted that the Bureau has experience in the successful implementation of both QA and EMD programs. The elements of the program already exist, and the challenge is how to migrate the new processes for QA and structured protocols into the existing Bureau infrastructure. Model legislation templates for protocol use are available from sources such as the National Academies of Emergency Dispatch (NAED).*

Quality Assurance in Public Safety Communications – ***Recommendation #1*** *expresses the need for expanding the existing QA systems to encompass fire and police call processing. There has been a significant degree of success in Maine with the application of EMD protocols and the EMD QA support system. The EMD protocol provides the benchmark upon which QA can effectively be performed. The absence of the equivalent protocol systems for fire and police makes it virtually impossible to objectively QA those call types. MCP firmly believes that the growth and application of QA systems for fire and police is the next logical and necessary step in the evolution towards the further application of QA standards in Maine's PSAPs.*

Structured Protocol Call Processing Systems – ***Recommendation #2*** *expressed the need for expanding the existing EMD structured protocol system to include fire and police protocols. The adoption of EMD protocols has made a significant difference in the standard of care for Maine's citizens, and no doubt has saved many lives. The adoption of fire and police protocols is the next logical and necessary step in the evolution towards the further application of industry best practices and the benefits that will be further afforded to citizens. As stated in 1.4.3 of the initial recommendations report, the adoption of structured protocols for fire and police call processing, along with sound QA practices, ensure the highest level of care and practice for not only the state's citizens, but also for all emergency responders.*

The full report is available at:
http://www.maine911.com/psap/Publications/MAINE%20PSAP_QAReportMAR2011.Final2.pdf

1.2.1 Moving Forward With The Recommendations

In July of 2011, the Bureau re-engaged MCP to assist in the development of three of the recommendations cited in the *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance"* report. The three tasks for the re-engagement of MCP were:

1. Determine funding options/strategies required to implement fire and police protocol systems.
2. Develop a PSAP audit process.
3. Develop a call-transfer protocol for Maine PSAPs.

1.3 Funding Options & Strategies Required To Implement Fire and Police Protocol Systems

The focus of this report, which is based on Task 1 (above), is to address the complexities concerning the introduction of structured protocol in public safety communications. MCP has direct experience, and over the years, there have been many lessons learned in this regard. Perhaps the most important lesson is to ensure that a practical implementation plan is established, and that personnel impacted by the implementation are provided with as much information as possible well in advance of the arrival of the new systems.

In order to assess and evaluate the impact that additional protocol systems will have on resources, various elements of call processing in Maine's 26 PSAPs have been measured and included in this report.

The introduction of two new protocol systems will predictably increase the demand for case review significantly beyond the current workload.

This report uses data offered by the PSAPs to define current call volumes by call type. This data is used to predict the number of calls that will require review and the application quality assurance. In addition, resourcing options for dealing with the additional case review work load have been included in this report.

Costs and funding for implementation options are also reviewed. These figures are based on budgetary quotes from Priority Dispatch Corp.™ (PDC) with the understanding that actual implementation costs will be the result of formal proposals submitted and potentially awarded to any protocol vendor through the standard Request For Proposal (RFP) process. The PDC numbers are included in this report to provide the decision makers with cost projections in the event that a decision is made to pursue the National Academies of Emergency Dispatch (NAED) protocol systems.

1.4 Standardization of Protocols Systems In Maine

Due to the success of the NAED EMD protocol in Maine, as well as the long-term relationship with PDC, this report describes aspects of the NAED protocol systems and the associated PDC suite of products. This overview is not intended to promote the NAED system in any way other than to provide a benchmark for a baseline solution based on logistics and costs.

The NAED EMD system has been used successfully in Maine PSAPs since 2007. Telecommunicators in every PSAP have been trained in its use, and most have recertified at least once. Most have become quite accustomed to the flow and rhythm of the system, and generally use it with ease. Refer to Appendix A – NAED Case Entry For Medical, Fire & Police Protocol Systems. Comparatively, the case entry protocols of the fire and police versions of the NAED systems function in a similar manner as the EMD case entry protocol.

1.4.1 Case Entry Similarities for EMD, EFD & EPD Protocol Systems

The successful adoption of the NAED EMD protocol, and the application of QA in EMD case review, has created procedural standards use throughout Maine PSAPs. The protocol sequence for establishing the initial contact and information exchange with callers has been defined, for every call, by the EMD case entry protocol.

1.4.2 Quality Assurance – Meeting QA Case Review Requirements

In addition to similarities in the function and features of the three protocol systems, there are aspects of the NAED QA system currently used for case review that must also be considered. AQUA™ Quality Assurance (QA) software has been purchased and installed at all 26 PSAPs. There are approximately 60 personnel trained to use the system to quality assure (evaluate) EMD calls. This is the same system that is used to evaluate fire and police calls that have been processed using the NAED fire and police protocol systems. The is another consideration for the adoption of the fire and police protocol systems in that personnel are trained in the use of AQUA which, with added EFD and EPD modules, is readily usable for the additional case review and QA report generation.

As suggested in the *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance"* report, the establishment of a QA program, and in particular, the establishment of a QA program manager within the Bureau must be considered a key next step to a protocol implementation effort.

1.4.3 Fast Track Approach

The pre-existing familiarity of PSAP staff with the NAED EMD protocol system as well as the QA system and processes may allow for a fast track approach that may enable and ease the adoption of fire and police protocol systems. The time required to ramp-up existing QA personnel to effectively deal with two new systems should also be reduced. If an aggressive approach to implementation was adopted (versus one PSAP at a time), it would still be a challenge to achieve statewide success in a timely fashion. However, the retooling to a completely new system would present even bigger challenges in this regard.

1.4.4 Additional Logistics

In addition to the logistics involved in the proposed implementation, there are other factors that need consideration. For example, the requirement to learn two protocol systems will challenge PSAP personnel. PSAPs are noted for resisting change, and there will be positive and negative outcomes as this project moves forward.

The current mandatory use of the NAED's EMD protocol and QA processes provide an advantage to telecommunicators and PSAP operations. For example, once an employee has been certified and trained in the EMD system, it is much easier for that employee to learn the EPD and EFD systems. Since the three NAED protocol software systems are virtually identical in functionality, a PSAP employee who is familiar with the EMD software can easily transition to the EPD and EFD software systems. This is because all three software systems are highly intuitive and readily learned. In addition, when multiple NAED protocols are taught together within a six-month window, the cumulative number of certification training days is reduced resulting in fewer days away from their respective PSAPs.

Another consideration of the logistics of an implementation of this magnitude is the interaction of the protocol software system and Computer Aided Dispatch (CAD) systems. Although the software allows for efficient and interactive call processing methodologies, it must be effectively interfaced to the CAD system. Prior to moving ahead with any implementation, the CAD/software interface for each protocol system must be developed and certified by the software supplier.

1.4.5 Comprehensive Protocol Implementation Plan

Refer to Appendix K – Comprehensive Protocol Implementation Plan. Note that this template is intended for protocol implementation in a single stand-alone PSAP. It is designed to lay out the steps involved in what typically takes five months to achieve. This time frame is recommended for brand new implementations with no working knowledge of protocols. However, since PSAPs are already familiar with the EMD system, the faster assimilation of two additional protocol systems by PSAPs would be expected, but not necessarily guaranteed. However, since the three NAED protocol software systems

are materially identical in functionality, a PSAP employee who is familiar with the existing EMD software should easily transition to the EPD and EFD software systems.

Of the two new protocol systems, EFD is by far the easiest to learn, as it is much less complicated in its application. EPD, on the other hand, is the more challenging protocol to master. As expected, police calls involve the collection of additional information such as suspect and vehicle descriptions, direction of travel and any other information pertinent to suspect apprehension. Therefore, in order to further enable the success of the implementation, consideration should be given to adopting call processing software for all three protocol systems.

1.4.6 Computer Aided Dispatch Systems

Finally, the issue of disparate and outdated CAD systems presents a barrier to protocol integration. Although the introduction of Next Generation 9-1-1 (NG9-1-1) technologies may be a step toward CAD hosting models, the range of CAD systems in use in Maine PSAPs and the logistics of upgrading existing technologies remains a challenge.

The following is a partial list of common implementation issues:

- Some telecommunicators may have difficulty mastering the new protocol systems
- Card set versions of the protocol systems are challenging to master (particularly EPD)
- PSAPs will face challenges synthesizing the fire and police case review (QA) workload
- Employees who are not experienced in the protocol software will face challenges learning how to use the new software
- There will most likely be computer aided dispatch (CAD) interface issues
- CAD systems may require upgrading (or replacing)
- Delays in implementing QA will have a negative impact on employee compliance levels

The Bureau has already experienced many of the foregoing issues having implemented EMD, and therefore is seeking a more comprehensive approach to the roll out of fire and police protocols.

1.4.7 Short and Long Term Procurement Strategies

As stated, creative planning and current PSAP familiarity with EMD and QA processes may allow for a fast track approach that may reduce this “worst-case” time frame. If the state adopts a long term procurement strategy, costs could be prorated and funds dispersed over a two or three-year period, depending on the approach chosen to implement. The overall project timeline would be driven by logistics associated to funding, training schedules, technology upgrades, case review and QA logistics based on the assumption that all 26 PSAPs would be involved.

1.4.8 Future PSAP Consolidation

Consideration must be given to weighing the recommendations in this report against future PSAP consolidations in Maine. Should legislators determine that certain PSAPs should consolidate, the reduced number of PSAPs would lessen the burden of implementation and reduce costs. In short, the overall costs of protocol implementation would be considerably impacted should the number of PSAPs be reduced.

1.4.9 Broadening Existing Rules

Just as the introduction of EMD resulted in the creation of standards and rules, the implementation of fire and police protocol systems will also require similar fire and police discipline specific rules.

The principles and objectives established for EMD by the MEMS Rules will need to be applied to fire and police protocol call taking systems. Managing of the QA processes for EMD, EFD, and EPD, as well as the reporting and auditing of QA compliance requirements, may best be managed by one entity (i.e., the Bureau).

In addition, the compulsory use of protocol, as well as the mandatory QA of all three disciplines, must be clearly articulated and stated in a single Bureau Rule.

1.4.10 Recommendations Pertaining to Broadening Existing Rules

> **Recommendation #1 – Establishment of Rules for EFD, EPD** – It is recommended that regulations and rules, mirroring existing rules for EMD, be established by the Bureau, for the EFD and EPD protocol systems.
>
> **Detail:** There will be a requirement to develop new regulations and rules for the EFD and EPD protocol systems that complement the existing rules for EMD. The rules provide the policies that PSAPs need to follow in order to meet the call processing standards and objectives established by the Bureau.

1.5 Implementation Options

There are three implementation options offered for consideration. Refer to Appendix L – Detailed Implementation Plan Options.

1.5.1 Option 1: One-Time Approach to Implementation

For a one-time implementation of the entire costs associated to add two additional protocol systems to Maine PSAPs, refer Appendix J – Potential Implementation Costs. This hypothetical quote from PDC includes potential costs associated to a complete statewide implementation. This quote was requested based on the new QA case review service that Priority Dispatch offers for its protocol users. This was deemed significant for inclusion in the PDC quote for consideration. The following represents most of the elements associated to a statewide implementation of the fire and police protocol systems, and also takes into account existing EMD certified telecommunicators as well as the annual licensing Extended Services Plan (ESP) fees associated to the existing EMD protocol system.

The quote supplied by PDC for a complete implementation, which includes one year of EFD and EPD case review is **$3,489,880.**

An additional quote that includes a complete implementation as well as one year of EMD, EFD, and EPD case review is **$3,976,080.**

There will also be recurring charges for maintenance, recertification, and continuing education materials over subsequent years. These recurring charges are estimated to be in the range of **$310,000** per year.

As there are currently no other vendors that can offer third party case review and QA, no other quotes were solicited.

1.5.2 Option 2: Multi-Year Plan Approach

The multi-year plan approach may be logistically and financially more realistic compared to a one-time all or nothing approach.

The multi-year approach for implementation might involve a phased approach with areas of the state divided into three implementation zones, with EFD and EPD rolled out in each zone and completed in every respect prior to moving to each remaining zone.

Another consideration would be to complete the EFD portion of the roll out across the state in year 1. Once PSAP staff have adjusted to the EFD protocol, and have mastered both EMD and EFD, then EPD would be rolled out. This would likely occur in year 2.

As previously stated, the EPD protocol system is the most difficult to master. It would make sense to introduce EFD first, followed by EPD.

If the state commits to a phased implementation spread over a fixed time period (i.e., 3 years), implementation costs could be negotiated to be paid according to an agreed to phased-centric payment cycle.

1.5.3 Option 3: Voluntary PSAP Participation

There are PSAPs in Maine that have expressed an interest in becoming beta test sites for the new protocols. Implementation and funding for a beta-style approach, although logistically simpler, does not satisfy the need to improve the standard of care and practice across the state. Understandably, the beta-style approach is easier to fund from the existing surcharge fund. However, it is recommended that Option 3 should only be considered if significant barriers to considering Options 1 and 2 arise.

1.5.4 Recommendations Pertaining to Protocol Roll Out

> **Recommendation #2** – **Option 2: Multi-Year Implementation** – It is recommended that a multi-year implementation plan be considered for the introduction of fire and police protocol systems.
>
> **Detail**: The multi-year implementation should involve a phased approach. The state could be divided into three implementation zones, with EFD and EPD rolled out in each zone and completed in every respect prior to moving to each remaining zone. Another option would be to complete the EFD portion of the roll out across the state in year 1. Once PSAP staff have

adjusted to the EFD protocol, and have mastered both EMD and EFD, then EPD would be rolled out. This would likely occur in year 2.

Recommendation #3 – Phased Introduction of Fire and Police Protocols – It is recommended that the first phase of the protocol implementation consist of EFD only, followed by the implementation of EPD.

Detail: The EPD protocol system is the most difficult to master; therefore the protocol roll out should introduce EFD first, followed by EPD.

1.5.5 Implementation Costs Analysis

Refer to Table 1 – Summary of Potential Implementation Costs on page 33 of this report. These figures are based on those supplied by Priority Dispatch and include a breakdown of all implementation costs.

Capital Costs – The middle column of Table 1 outlines the one-time capital costs associated to an EFD and EPD implementation. The total of **$2,243,480** applies to software, printed materials and consulting fees.

Recurring Costs – The right hand column of Table 1 outlines the recurring costs associated to annual licensing fees referred to as the Extended Service Plan (ESP), as well as the costs associated to outsourced case review.

- If case review *was not* outsourced, the only recurring cost would be the ESP fee of **$274,000** which includes all three protocol systems.
- If the ESP and case review costs for EFD and EPD are combined, then the annual recurring cost would be approximately **$1,246,400**.
- If the ESP and case review costs for EMD, EFD and EPD are combined, then the annual recurring cost would be approximately **$1,732,600**.

Aggregate Costs – The two bottom rows of Table 1 show the aggregate costs of implementation.

- The aggregate first-year costs of implementing EFD, EPD and outsourcing EFD and EPD case review is **$3,489,880**.
- The aggregate first-year costs of implementing EFD, EPD and outsourcing EMD, EFD, and EPD case review is **$3,976,080**.

1.5.6 Recommendations Pertaining to Procurement

Recommendation #4 – Sourcing the Three Protocol Systems – It is strongly recommended that the EMD, EFD, and EPD protocol systems be sourced from the same supplier.

Detail: The value in sourcing the protocol systems from the same supplier ensures that differences in the functionality of each protocol discipline system are minimized. This ensures ease of learning the similarities of each discipline. Since most protocol systems are software

based, the flow of call processing and the cognitive skills required for navigating through the systems become much more intuitive.

Recommendation #5 – Meeting the Four Essential Objectives of Call Processing – It is recommended that the protocol system adopted for EFD and EPD satisfy the four essential objectives of call processing.

Detail: There are four essential objectives of emergency call processing that are considered fundamental and mandatory components of every emergency call. The supplier of the protocol system must ensure that these objectives are achieved for every call. The four objectives are:

1. Determining What Has Happened,
2. Assessing Scene Safety,
3. Initiating An Appropriate Response, and
4. Giving Instructions to the Caller.

Recommendation #6 – Protocol Software Systems – It is recommended that the protocol system adopted for EFD and EPD are software based, and that the appropriate Computer Aided Dispatch (CAD) interfaces are installed at all telecommunicator workstations.

Detail: The complexities of the protocol systems and the volume of information associated to police calls for service are easily managed using call processing software. Intuitive based systems provide recommended instructions for callers, and make caller management easier. As well, protocol software systems are capable of providing detailed telecommunicator actions associated to processing calls for service. Another key component of the functioning of the software system is a CAD interface that provides the integration pathways between the CAD and the software. The supplier of the protocol software must ensure that a functioning interface exists for PSAP CAD systems.

1.5.7 QA Cost Analysis

Refer to Table 2 – NAED Quality Assurance Case Review on page 35 of this report. The QA case review criteria applied to the QA case review, and cost analysis in this report, are based on the statistical criteria established by the NAED for accreditation levels of case review.

1.5.7.1 PSAP Employees Performing QA – In an effort to analyze current and future QA case review costs, it was necessary to determine the costs to PSAPs of the existing case review and QA program. PSAPs were requested to submit how many certified QA personnel on staff, as well as an estimate as to how much effort is being committed to case review. Refer to Appendix F – Current EMD Quality Assurance Case Review Statistics for a breakdown of PSAP QA resources and an extrapolation of current QA costs. Refer also to Table 3 - Annual QA Cost Analysis Recap on page 36 of this report that summarizes the information in Appendix F, showing that there are about **66** certified QA personnel costing PSAPs approximately **$475,000** annually in the performance of case review.

1.5.7.2 State Employees Performing QA – Refer to Table 3 – Annual QA Cost Analysis Recap on page 36 of this report. It shows the number of Full-Time Equivalent (FTE) position equivalents that would be required to perform case review at the state level. The cost estimations are based on the reported dispatched events from each PSAP. The volume of calls that require case review is based on the current NAED standard as outlined in Table 2 – NAED Quality Assurance Case Review. A formula for establishing case load and output for each FTE was developed in conjunction with several current QA personnel performing these duties. The formula assumes that the average QA resource can review five cases per hour, seven hours a day. Assuming that the QA resource is available for 60% of the annual hours available for work, determines the actual output of each FTE. The annual case review output of each FTE would be **5460 Cases per FTE per year.**

1.5.7.3 EFD & EPD Only Case Review – If there are 61,048 EFD and EPD cases per year in Maine that require review, and if this work was to be performed by the state, then the number of QA case reviewers for EFD and EPD only, would be **11.181 FTEs.**

The cost of supporting 11.181 FTEs, determined by assuming an annual rate of $70,000 per FTE, would be **$783,000.**

1.5.7.4 EMD, EFD & EPD Case Review – If there are 97,100 EMD, EFD, and EPD cases per year in Maine that require review, and if this work was to be taken over by the state, then the number of QA case reviewers for the three protocol systems would be **17.8 FTEs.**

The cost of supporting 17.8 FTEs is determined by assuming an annual rate of $70,000 per FTE would be **$1,246,000.**

1.5.7.5 Outsourcing Case Review – Table 3 also shows the costs associated to outsourcing QA case review to a third party. Since Priority Dispatch is the only third party entity offering case review services, the numbers that appear in Table 3 were gleaned from the quote that appears in Appendix J – Potential Implementation Costs. Outsourcing case review costs are as follows:

- Outsourcing EFD and EPD case review is estimated to be approximately **$972,000**
- Outsourcing EMD, EFD, and EPD case review is estimated to be approximately **$1,459,000**

1.5.8 Recommendations Pertaining to Quality Assurance and Case Review

Recommendation #7 – EMD Quality Assurance & Case Review – It is recommended that quality assurance and case review for EMD continue to be conducted at the PSAP level.

Detail: Generally, the case review and QA process established for EMD is being well supported by the certified QA reviewers at each PSAP. However, the addition of two more protocol systems, and the case load associated to them, cannot be achieved at the PSAP level without additional resources. In the interim, case review for EMD must be ongoing. It is also of significant value to ensure that qualified QA staff is present to ensure the outcomes of the QA processes (re-education, remediation, recertification, etc.). Even if case review and QA for EFD

and EPD is outsourced, the requirement for an on-site PSAP QA specialist will continue to exist, as a local resource would be required to select the cases for review, as well as the need to follow up with telecommunicators for their individual case reviews.

Recommendation #8 – EFD, EPD Quality Assurance & Case Review – It is recommended that a quality assurance and case review unit be established at the state level, in conjunction with the phased roll-out of the EFD and EPD protocols.

Detail: Although costs associated to outsourcing case review and QA may be in the same range as creating a team of case reviewers, there are benefits to retaining ownership of case review within Maine. Third party case review is a fairly new concept, and anecdotally is meeting with mixed reviews. Issues such as philosophical differences between anonymous case reviewers, technological limitations, as well as confidentiality of information remain. It would be more appropriate to create a case review team that would become familiar with the dynamics and idiosyncrasies of individual PSAPs, and establish relationships with them. The logistics of how the team would function would need to be developed as the new protocol systems are rolled out. Perhaps the strongest argument for this approach is that rather than funding a private, out-of-state commercial firm, the creation of 18 new jobs within Maine is the more desirable choice.

Recommendation #9 – EFD, EPD Quality Assurance & Case Review – It is recommended that quality assurance and case review for EFD and EPD begin immediately upon their respective implementations.

Detail: PSAPs that delay the implementation of case review and QA processes, limit the effectiveness of the new protocol systems. Expectations must be set at the beginning of any protocol implementation that case review and QA is an absolute component of the system, and that all PSAP staff understands this requirement. PSAPs that establish a “period of grace” between implementation and commencing of case review, only do themselves and their stakeholders a disservice.

1.5.9 Recommendations Pertaining to Funding

Recommendation #10 – **Funding** – It is recommended that a multi-year implementation funding plan be considered for the introduction of fire and police protocol systems, and that the costs of implementation be funded by the 9-1-1 surcharges.

Detail: A multi-year approach to implementation would allow more flexibility for funding issues. It must be assumed that the RFP process would include accommodation for a multi-year implementation that would be funded according to pre-established and agreed to project milestones. If the only funding source available for this project is the 9-1-1 surcharge fund, then that would be the obvious for sources of funds for this effort.

1.5.10 Future PSAP Consolidation

Consideration must be given to weighing the recommendations in this report against future PSAP consolidations in Maine. Should legislators determine that certain PSAPs should consolidate, the reduced number of PSAPs would lessen the burden of implementation and reduce costs. In short, the overall costs of protocol implementation would be considerably impacted should the number of PSAPs be reduced.

1.5.11 Advancing Best Practices in Maine

Maine remains one of the only states to have mandated the use of a high quality and internationally recognized EMD protocol system as well as a compulsory QA process for all PSAPs, and is now prepared to move forward to adopt the same standard for fire and police call processing. The establishment of the same requirements for fire and police call processing will advance Maine as a national leader in the establishment of best practices.

1.6 Establishment of Oversight Committees

The establishment of oversight committees at various levels of a protocol implementation of this magnitude is essential to the overall success of the project. The various committees established for the implementation project will:

- Oversee all aspects of the implementation
- Provide ongoing post-implementation guidance and administration required to ensure continuity of PSAP operations as the implementation matures and becomes entrenched in the day to day delivery of emergency services
- Provide a venue for intercommunications between committees

1.6.1 State of Maine Emergency Communications Steering Committee (MECSC)

The State of Maine Emergency Communications Steering Committee (MECSC) oversees protocol and QA operations throughout the state. It is a senior manager's advisory group that reports to the Public Utilities Commission. As each PSAP implements the new protocol systems, statewide issues are certain to emerge and will need to be addressed. Global issues and solutions for the state are administered and dealt with in a cohesive and coordinated manner. The MECSC's membership includes but is not limited to representatives from the following entities:

- Public Utilities Commission
- Department of Public Safety
- PSAP Representative
- Enhanced 9-1-1 Advisory Council

1.6.2 Emergency Communications Review Committee (ECRC)

The Emergency Communications Review Committee (ECRC) reports to the MECSC. It is a senior manager's advisory group. Each local PSAP Operations Review Committee has representation on the ECRC. It deals with all PSAPS on protocol and QA matters on a regular basis. It makes recommendations to the MSC on policy and procedure issues, as well as operations issues concerning

both PSAPs and emergency responders. The ECRC's membership includes but is not limited to representatives from the following entities:

- PSAPs
- Emergency Services Communications Bureau
- Enhanced 9-1-1 Advisory Council
- Maine Emergency Medical Services
- Law Enforcement
- Fire Services
- Medical Authority
- Quality Assurance Program
- Information Technology

1.6.3 PSAP Dispatch Review Committee (PDRC)

The local PSAP Dispatch Review Committee reports to the ECRC. It is a middle management working group. Each PSAP PDRC deals with internal protocol use, compliance and QA issues on a regular basis. It reviews PSAP performance and compliance issues, and implements Continuing Education to resolve any shortcomings. The PDRC's membership includes but is not limited to:

- PSAP Supervisors
- QA personnel
- Trainers
- Telecommunicator Representative
- Local Emergency Services (Police, Fire, EMS)
- Information Technology

1.6.4 Committee Organization Chart

The following is a graphic representation of the recommended committee organization.

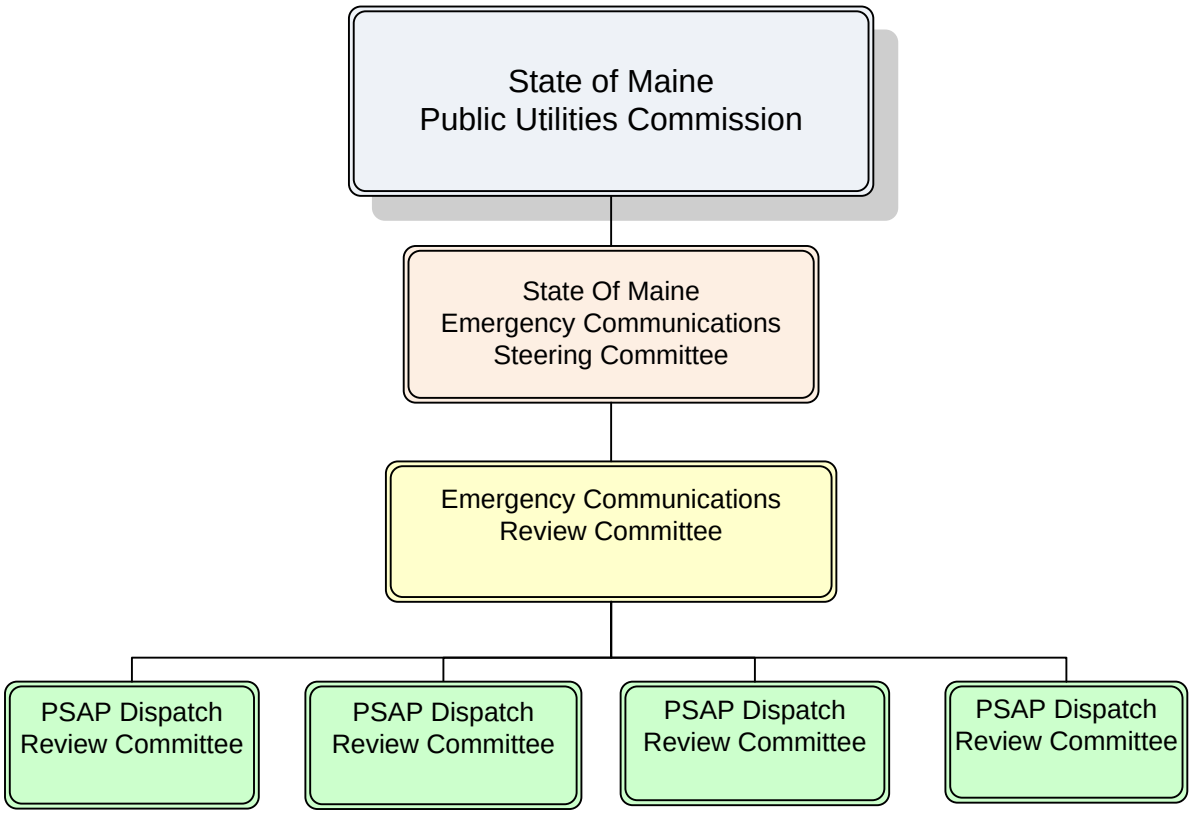

Figure 1 – Recommended Committee Organization Chart

1.6.5 Recommendations Pertaining to Committee Organization

Recommendation #11 – **Committee Organization** – It is recommended that a tiered committee organization consisting of an Emergency Services Steering Committee, an Emergency Communications Review Committee, and 26 PSAP Dispatch Review Committees be established to oversee the implementation and administration of Maine's protocol and QA program.

Detail: The establishment of oversight committees at various levels is essential to the overall success of the project. The committees will oversee all aspects of the implementation, provide ongoing post-implementation guidance and administration required to ensure continuity of PSAP operations, and provide a venue for intercommunications between committees.

2 IMPLEMENTING STRUCTURED PROTOCOL

2.1 Introduction

In May of 2010, the Emergency Services Communications Bureau (Bureau) sought a qualified consultant to assist with the creation of a QA program. The purpose of the program was to establish processes that would audit and monitor compliance with emergency dispatch standards, practices and procedures. This included providing assistance and guidance in the establishment of processes designed to promote adherence to call-taking protocols, evaluate and make recommendations for facilitating the learning process, and provide a framework for continuous improvement at each PSAP in Maine.

Mission Critical Partners, Inc. (MCP) was contracted to assist in this process. MCP is headquartered in State College, Pennsylvania, with offices in Harrisburg and Pittsburg, Pennsylvania, Salem, Oregon, and Southlake, Texas. MCP serves clients throughout North America. MCP's team consists of former public safety managers, project management professionals (PMPs), and technology, forensic and policy specialists. MCP principals have each invested more than two decades in the 9-1-1 industry and continue to serve in key leadership roles in all the major industry organizations—National Emergency Number Association (NENA), Association of Public-Safety Communications Officials International (APCO), and the Industry Council for Emergency Response Technologies (iCERT), formally known as the 9-1-1 Industry Alliance—and as advisors to key federal and state governmental bodies. MCP's mission is to support life safety communications clients through improved policy, systems and processes.

In March of 2011, MCP delivered its report, *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance,"* to the Public Utilities Commission.

The report made several recommendations intended to reinforce existing Bureau and the Department of Public Safety's (DPS) Maine Emergency Medical Services (MEMS) Bureau Rules, as well as provide a pathway to improved levels of service for Maine's citizens. It made recommendations that suggested specific steps to ensure that existing expectations for PSAPs are met and audited with a minimal impact on existing resources.

The report's recommendations were also based on past efforts to establish best practices, the current state of PSAP operations, as well as the vision of the state's emergency services stakeholders (fire, law enforcement, and emergency medical services providers) to improve the delivery of their respective services.

2.2 Recommendations from March 2011

The following represents a narrative description and overview of the recommendations and comments from the *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance," report:*

Institutionalizing Processes – *In order to expand the existing EMD QA and structured protocol processes already imbedded in state legislation, Bureau and MEMS rules, consideration must be given to the challenges associated to institutionalizing the recommendations supporting the adoption of fire and police protocols and QA processes as suggested in this report. For example, existing resources both at the PSAP as well as the Bureau will require evaluation to more accurately determine where resource and technology shortcomings exist. In order to adopt these recommendations, extra resources will be required. Funding for extra human resources as well as the capitol and operations costs required for program implementation will be a challenge.*

Moving forward with implementing these processes in state infrastructure will most likely require at least one additional position to oversee the execution of these new programs. The expertise to manage these recommendations exists in the Bureau. However, existing resources will require expansion to achieve these goals. It should be noted that the Bureau has experience in the successful implementation of both QA and EMD programs. The elements of the program already exist, and the challenge is how to migrate the new processes for QA and structured protocols into the existing Bureau infrastructure. Model legislation templates for protocol use are available from sources such as the National Academies of Emergency Dispatch (NAED).

Quality Assurance in Public Safety Communications – Recommendation #1 *expresses the need for expanding the existing QA systems to encompass fire and police call processing. There has been a significant degree of success in Maine with the application of EMD protocols and the EMD QA support system. The EMD protocol provides the benchmark upon which QA can effectively be performed. The absence of the equivalent protocol systems for fire and police makes it virtually impossible to objectively QA those call types. MCP firmly believes that the growth and application of QA systems for fire and police is the next logical and necessary step in the evolution towards the further application of QA standards in Maine's PSAPs.*

Structured Protocol Call Processing Systems – Recommendation #2 *expressed the need for expanding the existing EMD structured protocol system to include fire and police protocols. The adoption of EMD protocols has made a significant difference in the standard of care for Maine's citizens, and no doubt has saved many lives. The adoption of fire and police protocols is the next logical and necessary step in the evolution towards the further application of industry best practices and the benefits that will be further afforded to citizens. As stated in 1.4.3 of the initial recommendations report, the adoption of structured protocols for fire and police call processing, along with sound QA practices, ensure the highest level of care and practice for not only the state's citizens, but also for all emergency responders.*

The full report is available at:
http://www.maine911.com/psap/Publications/MAINE%20PSAP_QAReportMAR2011.Final2.pdf

2.3 Moving Forward With The Recommendations

In July of 2011, the Bureau re-engaged MCP to assist in the development of three of the recommendations cited in the "Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance" report.

The three tasks for the re-engagement of MCP were:

1. Determine funding options/strategies required to implement fire and police protocol systems.
2. Develop a PSAP audit process.
3. Develop a call-transfer protocol for Maine PSAPs.

Task 1, which is the focus of this report, addresses the complexities concerning the introduction of structured protocol in public safety communications. Success requires the establishment and execution of a strategic implementation plan. The plan must encompass all elements of the implementation from the logistics of rolling out the protocol systems to the impact on PSAP resources.

Efforts conducted during the Fall of 2011 resulted in the completion of Tasks 2 and 3 from the list above. The material delivered to the Emergency Services Communications Bureau may be found at the following URLs:

The PSAP Self Audit Tool document (the product of Task 2) may be found at:
http://www.maine911.com/psap/docs/MainePSAPSelfAudit02NOV2011.doc

The Call Transfer Policy Template (the product of Task 3) may be found at:
http://www.maine911.com/psap/docs/CALLXFERTEMPLATE_FINAL_02DEC2011V3.rtf

Note that the Call Transfer Policy document is designed to be a dynamic work in progress, and it is anticipated that throughout the beta test period, modifications to the document will occur. Refer to Appendix B – Excerpt From State of Maine – Call Transfer Policy Template.

2.4 Funding Options & Strategies Required To Implement Fire and Police Protocol Systems

As stated, the focus of this report is to address the complexities concerning the introduction of structured protocol in public safety communications. MCP has direct experience, and over the years, there have been many lessons learned in this regard. Perhaps the most important lesson is to ensure that a practical implementation plan is established, and that personnel impacted by the implementation are provided with as much information as possible well in advance of the arrival of the new systems.

2.4.1 PSAPs and Protocol

At the PSAP, protocol becomes the standard of care and practice. Emergency calls that arrive are processed according to a defendable standard, and every incident receives the same level of service no matter what day it is, what time of day it is, or who is taking the call.

PSAPs implementing protocol, along with a QA process, establish internal practices that yield tangible results insofar as delivering the highest standard of care and practice for both the public as well as emergency responders. The QA process, often referred to as a never ending cycle of improvement, ensures that telecommunicators receive feedback on a regular basis regarding how well they are doing their jobs. This continual cycle of improvement, which is perhaps the biggest benefit of QA, provides the structure for positive re-enforcement, reeducation or remediation if required, and is the most effective way of improving on-the-job habits and behaviors. This ultimately leads to employees who feel good about their workforce contribution, and have been assured that they are being supported by the supervisory and management team. This in turn leads to increases in job satisfaction that can lead to lower PSAP attrition, and other tangible workplace benefits.

2.4.2 Change Management and Protocol Implementation

Change management is a structured approach to shifting or transitioning individuals, teams, and organizations from the current state to a desired future state. For PSAPs, the adoption of protocols for police and fire call processing represents a change from an unstructured method to a highly structured method for performing those tasks. This change predictably creates real and foreseeable workplace challenges.

The biggest challenge PSAPs face when implementing structured protocols is telecommunicator resistance to the introduction of a different way of performing their jobs. They do not immediately see protocol as a tool that improves their ability to process emergency calls. On the contrary, telecommunicators may see themselves as victims being forced into doing something that they see no clear reason for doing. Unfortunately, most reasons for protocol implementation are the result of mishandled calls where the outcomes have not been positive. Instead of viewing the new system as a useful tool that provides a safety net for ensuring all calls are processed correctly, employees view the system as being almost punitive in nature. For others, the new system implies that they are incompetent and unable to perform their jobs in a satisfactory nature. Organizations that adopt protocols to deliver their services significantly increase the quality of their services. And organizations that adopt protocol before a tragedy occurs should be recognized for their foresight and vision in adopting an industry recognized best practice.

2.4.3 Recommended Best Practices

The National Emergency Number Association (NENA) is a not-for-profit public safety organization that serves its members and the greater public safety community as the only professional organization solely focused on 9-1-1 policy, technology, operations, and education issues. NENA works with 9-1-1 professionals nationwide to establish industry leading standards, training, and certifications. Through the association's efforts to provide effective and efficient public safety solutions, NENA strives to protect human life, preserve property, and maintain the security of our communities.

In 2008, NENA published the Emergency Call Processing Protocol Standard (NENA Emergency Call Processing Protocol Standard/Model Recommendation NENA 56-006 June 7, 2008). It provides emergency communication processing centers with a framework from which agencies can define appropriate emergency communication protocol requirements and recommendations for day-to-day

operations and for disaster/major event scenarios. It is designed to provide uniformity and consistency in the handling of 9-1-1 and other emergency calls. It recommends standardized call processing protocols for all emergency call types, standardized prioritization of calls, and standardized pre-planned responses based on the level of prioritization of calls. The research, development, and implementation of call-processing protocols is endorsed by NENA as the most effective way to ensure the highest standard of care for both the emergency responders as well as the public.

The following is an excerpt from the NENA Emergency Call Processing Protocol Standard/Model Recommendation NENA 56-006 June 7, 2008:

> ***"2.2 Reason to Implement***
> *NENA recognizes the value of a standardized, structured approach to call taking in 9-1-1 and emergency communications centers for day-to-day, routine operations. Large-scale incidents, including natural and man-made disasters, will have a substantial impact on 9-1-1 center operations and emergency call handling. In order to manage these events successfully, centers must have both routine call taking protocols and procedures, as well as contingency call taking protocols and procedures for such large-scale events. Further, recognizing that quality assurance and quality improvement processes are a required component of PSAP and emergency communication center operations, NENA supports the use of call taking protocols defined in this standard as a foundational element for measuring emergency communication processing center performance, and developing targeted continuing education and continuous feedback to the Telecommunicator."*

2.4.4 Existing Rules & Processes Affecting EMD

The Department of Public Safety's (DPS) Maine Emergency Medical Services (MEMS) Bureau is responsible for the coordination and integration of all state Emergency Medical Service (EMS) activities. The Maine Emergency Medical Services Act defines EMS licensing requirements and includes certification and licensing of personnel tasked with providing EMD services.

MEMS Administrative Rule Chapter 5-A Emergency Medical Dispatch Licensure sets specific QA reporting requirements as well as compliance goals for EMD call taking and dispatching throughout the state This Rule required all dispatch centers using the EMD protocols to comply with the QA requirements which began March 2010. Chapter 3-A Emergency Dispatch Licensure required all EMD centers to transition to a common protocol by July 1, 2010.[1]

2.4.5 Changes to Rulemaking and Standards

The Bureau has the statutory authority to create standards necessary to provide for the operation of the state E9-1-1 system through the routine technical Administrative Rule process. Rules have been established for PSAP operations and may be found in Chapter 1: Standards For Establishing A

[1] See http://www.maine.gov/dps/ems/documents/16-163_C1-17_Effective100109&010110.pdf

Statewide Enhanced 9-1-1 System[2]. Minimum call answering and call taker and dispatch training standards are found in this Chapter.

MEMS Administrative Rule Chapter 5-A Emergency Medical Dispatch Licensure sets specific QA reporting requirements as well as compliance goals for EMD call taking and dispatching throughout the state This Rule required all dispatch centers using the EMD protocols to comply with the QA requirements beginning March 2010. Chapter 3-A Emergency Dispatch Licensure required all EMD centers to transition to a common protocol by July 1, 2010.[3]

2.4.6 Broadening Existing Rules

Just as the introduction of EMD resulted in the creation of standards and rules, the implementation of fire and police protocol systems will also require similar fire and police discipline specific rules.

The principles and objectives established for EMD by the MEMS Rules will need to be applied to fire and police protocol call taking systems. Managing of the QA processes for EMD, EFD, and EPD, as well as the reporting and auditing of QA compliance requirements, may best be managed by one entity (i.e., the Bureau).

In addition, the compulsory use of protocol, as well as the mandatory QA of all three disciplines, must be clearly articulated and stated in a single Bureau Rule. In short, language similar to the existing MEMS Rules should be created for EPD and EFD training, QA reporting, certifications, licensing requirements, and funding. PSAPs that achieve success with structured protocols have made the use of the protocol systems a condition of employment. Clear expectations must also be established concerning compliance to all protocol systems.

> **Recommendation #1 – Establishment of Rules for EFD, EPD** – It is recommended that regulations and rules, that mirror the intent of the existing rules for EMD, be established by the Bureau for the EFD and EPD protocol systems.
>
> **Detail:** There will be a requirement to develop new regulations and rules for the EFD and EPD protocol systems that complement the existing rules for EMD. The rules provide the policies that PSAPs need to follow in order to meet the call processing standards and objectives established by the Bureau.

2.4.7 Future PSAP Consolidation

Consideration must be given to weighing the recommendations in this report against future PSAP consolidations in Maine. Should legislators determine that certain PSAPs should consolidate, the reduced number of PSAPs would lessen the burden of implementation and reduce costs. In short, the overall costs of protocol implementation would be considerably impacted should the number of PSAPs be reduced.

[2] See http://www.maine.gov/sos/cec/rules/65/chaps65.htm#625
[3] See http://www.maine.gov/dps/ems/documents/16-163_C1-17_Effective100109&010110.pdf

2.4.8 Advancing Best Practices in Maine

Maine remains one of the only states to have mandated the use of a high quality and internationally recognized EMD protocol system as well as a compulsory QA process for all PSAPs, and is now prepared to move forward to adopt the same standard for fire and police call processing. The establishment of the same requirements for fire and police call processing will advance Maine as a national leader in the establishment of best practices.

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3 IMPLEMENTATION PLAN OPTIONS

3.1 Considerations

In order to assess and evaluate the impact that additional protocol systems will have on resources, various elements of PSAP call processing have been measured and included in this report.

The introduction of two new protocol systems will predictably increase the demand for case review significantly beyond the current workload.

This report uses data offered by the PSAPs to define current call volumes by call type. This data is used to predict the number of calls that will require review and the application quality assurance. In addition, resourcing options for dealing with the additional case review work load have been included in this report.

Costs and funding for implementation options are also reviewed. These figures are based on budgetary quotes from Priority Dispatch Corp.™ (PDC) with the understanding that actual implementation costs will be the result of formal proposals submitted and potentially awarded to any protocol vendors through the standard RFP process. The PDC numbers are included in this report to provide the decision makers with cost projections in the event that a decision is made to pursue the NAED protocol systems.

As previously stated, the implementation of a state-wide roll out of two new protocol systems will have a major impact on PSAPs. The adoption of fire and police protocol will be a long, but not impossible journey. The state-wide roll out of two new protocol systems will challenge everyone involved in the project, and will require a complete project management charter, and the utilization of consulting resources. It is fully expected that to enable the success of the program roll out, a close working relationship with the vendor of choice will be required.

3.2 The Four Essential Objectives of Call Processing

There are certain elements of emergency call processing that are considered fundamental and mandatory components of every emergency call. In order for every reported event to receive a consistent level of evaluation and processing, these elements (or benchmarks) must be achieved by the telecommunicator processing the call. The adoption of a protocol system ensures that these benchmarks are met. The four essential objectives of call processing are:

1. **Determining What Has Happened** – In most call processing scenarios the determination of what has happened is achieved by posing the question, *"Okay, tell me exactly what happened."* This opening question has been defined in the state of Maine as the standardized protocol for every call received by the PSAP. It is considered to be one of the most powerful questions in public safety.
2. **Assessing Scene Safety** – The second essential objective is the posing questions to the caller that would reveal any scene safety issues. This is of particular issue in fire and police events where there are potentially many factors or conditions at the scene that would impact the safety and well being of the caller as well as emergency responders. The telecommunicator, through

their training certification, is taught to intuitively question the caller based on the caller's response to the "Okay, tell me exactly what happened" question.

3. **Initiating An Appropriate Response** – This is the third essential objective. This objective is usually achieved by notifying the appropriate emergency responders of the emergency event. In other words, the call is assigned a pre-determined priority that drives when the call is dispatched. The priority and urgency of dispatch have been predetermined by emergency responders and are usually incorporated into the PSAP's standard operation procedures.
4. **Giving Instructions to the Caller** – The fourth essential objective is the delivering of pre-arrival instructions to the caller. These will vary depending on the nature of the event. For example, a medical call involving child birth would involve instructions specific to delivering the child and caring for the mother until paramedics arrives. For a fire event that involved a person trapped in a structure, the pre-arrival instructions would consist of specific actions that the caller could take to get to safety or take proactive life saving action pending the arrival of fire fighters. A law enforcement event may involve weapons or many other circumstances where both the caller and emergency responders are in immediate danger. Pre-arrival instructions for events involving weapons or any other dire circumstance are essential to the preservation of life and are considered to be a high priority particularly for high acuity/low frequency events.

3.3 Commercially Available Protocol Systems

Most commercially available call processing systems are founded upon a standard of care and practice that defines and drives call processing benchmarks, and the desired outcomes for every call (i.e., the four essential objectives of call processing). These four essential elements are generally accepted as "what needs to happen" when a call for emergency assistance arrives at an emergency communications call processing facility. In other words, the telecommunicator processing the call for service needs to achieve, at a minimum, these four essential objectives.

There are three structured protocol systems available for emergency call processing that are intended to enable telecommunicators to achieve the four essential elements of a call. The three protocol systems that enable telecommunicators to apply a consistent level of care and practice to every call for service consist of:

- Emergency Medical Dispatch (EMD) protocol
- Emergency Fire Dispatch (EFD) protocol
- Emergency Police Dispatch (EPD) protocol

These systems are commercially available for purchase with the three dominant suppliers of emergency dispatch protocols as follows:

APCO – The Association of Public-Safety Communications Officials International (APCO) produces EMD, EFD, and EPD Guidecards for use by PSAPs. APCO's Guidecard systems are guideline based, and are customizable to individual agency needs. The three call taking systems are available in software format and are sold under the APCO 9-1-1 Adviser™ product. Certification training for telecommunicators is available through the APCO Institute. The Guidecard systems and software, although competitively priced, are "guideline" based and are not intended to be used as a structured

protocol system. In addition, the customizability of the system for individual PSAPs could be considered a step away from standardization of call processing methodologies. Although used extensively throughout the United States, the APCO system nonetheless remains a guideline based system. As well, it does not appear that APCO offers PSAP accreditation in the use of its guideline based system.

PowerPhone – PowerPhone is a producer of EMD, EFD, and EPD call processing products. They offer tablet style call taking card sets for EMD, EFD, and EPD, as well as offering an advanced call handling system called Total Response using a software program marketed as Computer Aided Call Handling (CACH™). In addition, they offer a QA product as well as Accreditation for communications centers. The Total Response systems and CACH software, although competitively priced, are customizable and "guideline" based. The PowerPhone system is not intended to be used as a structured protocol system. Similarly, the customizability of the system for individual PSAPs could be considered a step away from standardization of call processing methodologies. Although used throughout the United States, the PowerPhone system nonetheless remains a guideline based system.

The foregoing examples of protocol systems standardize call processing by ensuring that the essential objectives of emergency call processing are met on every call, and offer a vast improvement over the absence of such systems. Although guideline based, significant improvements in call processing methodologies are enabled by the adoption of guideline based systems. Most of these systems are researched and developed by subject matter experts and are updated on a regular basis.

Although guideline based, the foregoing systems must be considered for implementation by Maine, and must also be considered in the competitive procurement process. Changes to products, as well as advancements in software versatility must always be evaluated at the time of considerations for contract award.

Priority Dispatch Corp.™ – PDC is a producer of the National Academies of Emergency Dispatch (NAED) EMD, EFD, and EPD call processing protocols. The NAED is the standards setting body that oversees the various elements and requirements of the protocol system, including elements of the QA system. These systems are offered in both card sets and software versions. The software versions of the call processing system are marketed under the brand name ProQA®. PDC also markets QA software under the brand name AQUA™. The NAED protocol systems are structured in nature, and cannot be changed or customized by their users. The NAED is also the accrediting agency for communications centers using their protocol systems. The NAED EMD system is currently used by Maine PSAPs as the mandatory EMD call processing system.

As intended by any call processing system, the NAED structured protocol systems standardize call processing by ensuring that the essential objectives of emergency call processing are met on every call. The NAED protocol systems are researched and developed by subject matter experts and are updated on a regular basis.

An informative article originally published in the April 2008 issue of 9-1-1 Magazine, provides an overview of the foregoing systems as well as commentary on QA entitled, *"The Numbers Game: Are*

Score-Based QA Systems Truly Representative of Dispatcher Performance?" may be found at that the following link:

http://www.9-1-1magazine.com/The-Numbers-Game/

3.3.1 Current and Future Protocol Systems

As shown, there are several commercial alternatives to fire and police call processing system. Each of the systems affords the same functionality for each of their protocol systems. Although these systems are each ubiquitous unto themselves, and from the telecommunicator's perspective work well together, there are several aspects of changing protocol systems that must be taken into consideration.

3.4 Standardization of Protocols Systems In Maine

Due to the success of the NAED EMD protocol in Maine, as well as the long-term relationship with PDC, this report describes aspects of the NAED protocol systems and the associated PDC suite of products. This overview is not intended to promote the NAED system in any way other than to provide a benchmark for a baseline solution based on logistics and costs.

The NAED EMD system has been used successfully in Maine PSAPs since 2007. Telecommunicators in every PSAP have been trained in its use, and most have recertified at least once. Most have become quite accustomed to the flow and rhythm of the system, and generally use it with ease. Refer to Appendix A – NAED Case Entry For Medical, Fire & Police Protocol Systems. Comparatively, the case entry protocols of the fire and police versions of the NAED systems function in a similar manner as the EMD case entry protocol.

3.4.1 Case Entry Similarities for EMD, EFD & EPD Protocol Systems

The successful adoption of the NAED EMD protocol, and the application of QA in EMD case review, has created procedural standards use throughout Maine PSAPs. The protocol sequence for establishing the initial contact and information exchange with callers has been defined, for every call, by the EMD case entry protocol. The case entry protocol appears in Figure 2 (below), and consists of the first three questions that appear in the following sequence:

Figure 2 – EMD Case Entry Protocol

It should be noted that the three case entry protocol questions shown in Figure 2 have been incorporated into the recently published Call Transfer Policy Template. Refer to Appendix B – Excerpt from State of Maine – Call Transfer Policy Template for specific details pertaining to the posing of the above noted case entry questions on every call received by a PSAP.

Refer to Figure 3 – EFD Case Entry Protocol (below). Like the EMD protocol, the NAED fire case entry protocol is similar to the EMD case entry protocol; however, the EFD protocol also directs the telecommunicator to ask the caller, "What's your name?"

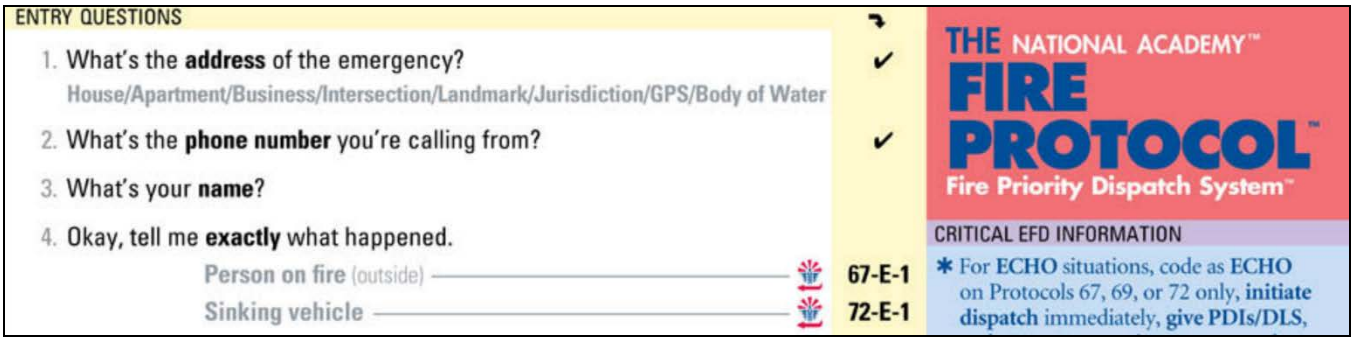


Figure 3 – EFD Case Entry Protocol

Refer to Figure 4 – EPD Case Entry Protocol (below). Like the EFD protocol, the NAED EPD police case entry protocol is identical to that of the EFD protocol which also directs the telecommunicator to ask the caller, "What's your name?"

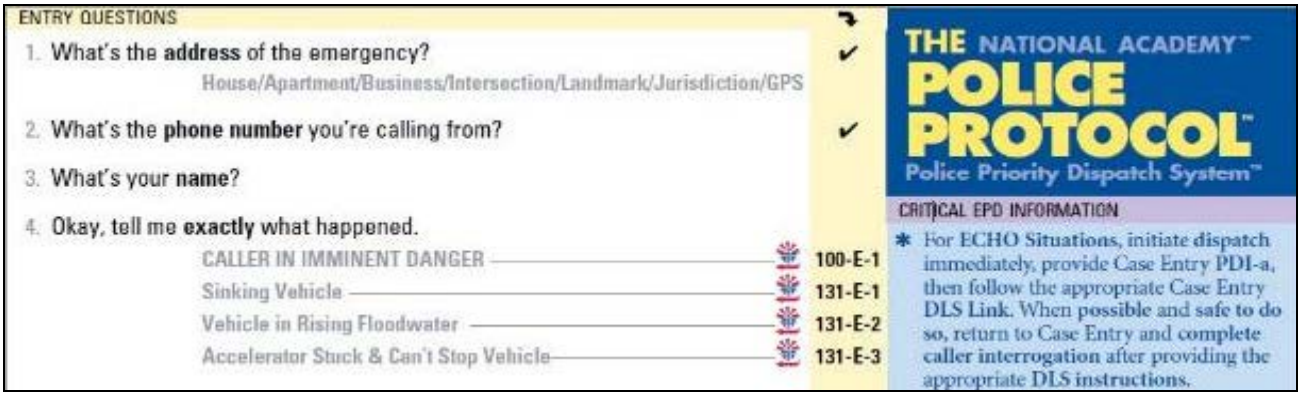


Figure 4 – EPD Case Entry Protocol

Because of the similarities in structure and function, careful consideration should be given to adopting the NAED fire and police protocol systems.

Should the state decide to adopt another supplier of protocol systems, it is strongly recommended that other changes are implemented that would allow for all three protocol systems be sourced from the same supplier.

3.4.2 Quality Assurance – Meeting QA Case Review Requirements

In addition to similarities in the function and features of the three protocol systems, there are aspects of the NAED QA system currently used for case review that must also be considered. AQUA™ QA software has been purchased and installed at all 26 PSAPs. There are approximately 60 personnel trained to use the system to quality assure (evaluate) EMD calls. This is the same system that is used to evaluate fire and police calls that have been processed using the NAED fire and police protocol

systems. The is another consideration for the adoption of the fire and police protocol systems in that personnel are trained in the use of AQUA which, with added EFD and EPD modules, is readily usable for the additional case review and QA report generation.

As suggested in the *"Recommendations for Establishing and Maintaining a Quality Assurance Program Related to PSAP Quality Assurance"* report, the establishment of a QA program, and in particular, the establishment of a QA program manager within the Bureau must be considered a significant next step to a protocol implementation effort:

> ***"1.5.2 Establishing a QA Program*** – The establishment of a statewide QA program will evolve through the guidance and collaboration of the Bureau and the Advisory Committee. It is anticipated that as the program is initiated, the Public Utilities Commission (PUC) would take a proactive role in planning for Bureau support resources. As the beta-test pilot project progresses, the PUC would assume responsibility for supporting the overall program.
>
> Consideration must be given to creating a QA program manager's position within the Bureau. This would represent the first step in institutionalizing the QA program on a statewide basis."

The QA program manager could oversee a significant part of any protocol implementation program, and make significant contributions to the concurrent establishment and oversight of a commensurate, statewide, QA program.

3.4.3 Fast Track Approach

The pre-existing familiarity of PSAP staff with the NAED EMD protocol system as well as the QA system and processes may allow for a fast track approach that may enable and ease the adoption of fire and police protocol systems. The time required to ramp-up existing QA personnel to effectively deal with two new systems should also be reduced. If an aggressive approach to implementation was adopted (versus one PSAP at a time), it would still be a challenge to achieve statewide success in a timely fashion. However, the retooling to a completely new system would present even bigger challenges in this regard.

3.4.4 Additional Logistics

In addition to the logistics involved in the proposed implementation, there are other factors that need consideration. For example, the requirement to learn two protocol systems will challenge PSAP personnel. PSAPs are noted for resisting change, and there will be positive and negative outcomes as this project moves forward.

The current mandatory use of the NAED's EMD protocol and QA processes provide an advantage to telecommunicators and PSAP operations. For example, once an employee has been certified and trained in the EMD system, it is much easier for that employee to learn the EPD and EFD systems. Since the three NAED protocol software systems are virtually identical in functionality, a PSAP employee who is familiar with the EMD software can easily transition to the EPD and EFD software systems. This is because all three software systems are highly intuitive and readily learned. In addition,

when multiple NAED protocols are taught together within a six-month window, the cumulative number of certification training days is reduced resulting in fewer days away from their respective PSAPs.

Another consideration of the logistics of an implementation of this magnitude is the interaction of the protocol software system and Computer Aided Dispatch (CAD) systems. Although the software allows for efficient and interactive call processing methodologies, it must be effectively interfaced to the CAD system. Prior to moving ahead with any implementation, the CAD/software interface for each protocol system must be developed and certified by the software supplier.

3.4.5 Comprehensive Protocol Implementation Plan

Refer to Appendix K – Comprehensive Protocol Implementation Plan. Note that this template is intended for protocol implementation in a single stand-alone PSAP. It is designed to lay out the steps involved in what typically takes five months to achieve. This time frame is recommended for brand new implementations with no working knowledge of protocols. However, since PSAPs are already familiar with the EMD system, the faster assimilation of two additional protocol systems by PSAPs would be expected, but not necessarily guaranteed.

3.4.6 Short and Long Term Procurement Strategies

As stated, creative planning and current PSAP familiarity with EMD and QA processes may allow for a fast track approach that may reduce this “worst-case” time frame. If the state adopts a long term procurement strategy, costs could be prorated and funds dispersed over a two or three-year period, depending on the approach chosen to implement. The overall project timeline would be driven by logistics associated to funding, training schedules, technology upgrades, case review and QA logistics based on the assumption that all 26 PSAPs would be involved. Should legislators determine that certain PSAPs should consolidate, the reduced number of PSAPs would lessen the burden of implementation and reduce costs.

Employees are currently certified in the NAED EMD system. It therefore stands to reason that learning two additional NAED protocol systems (EFD and EPD) should be much easier for EMD certified employees to comprehend.

The three NAED protocol software systems are materially identical in functionality. Therefore, a PSAP employee who is familiar with the existing EMD software should easily transition to the EPD and EFD software systems.

The three software systems are highly intuitive and readily learned, and when multiple protocols are taught together within a six-month window, the cumulative number of certification training days may be reduced. This may result in trainees spending less time away from their respective PSAPs.

It should be noted that, of the two new protocol systems, EFD is by far the easiest to learn, as it is much less complicated in its application. EPD, on the other hand, is the more challenging protocol to master. As expected, police calls involve the collection of additional information such as suspect and vehicle descriptions, direction of travel and any other information pertinent to suspect apprehension.

Therefore, in order to further enable the success of the implementation, it is recommended that call processing software for all three protocol systems be used in all PSAPs.

3.4.7 Computer Aided Dispatch Systems

Finally, the issue of disparate and outdated CAD systems presents a barrier to protocol integration. Although the introduction of Next Generation 9-1-1 (NG9-1-1) technologies may be a step toward CAD hosting models, the range of CAD systems in use in Maine PSAPs and the logistics of upgrading existing technologies remains a challenge.

3.4.8 Recap of Implementation Issues

The following is a recap of common implementation issues:

- Some telecommunicators may have difficulty mastering the new protocol systems
- Card set versions of the protocol systems are challenging to master (particularly EPD)
- PSAPs will face challenges synthesizing the fire and police case review (QA) workload
- Employees who are not experienced in the protocol software will face challenges learning how to use the new software
- There will most likely be computer aided dispatch (CAD) interface issues
- CAD systems may require upgrading (or replacing)
- Delays in implementing QA will have a negative impact on employee compliance levels

The Bureau has already experienced many of the foregoing issues having implemented EMD, and therefore is seeking a more comprehensive approach to the roll out of fire and police protocols.

3.5 Supporting Data

The following is an overview of the statistical data and cost projections used in the various aspects of this report.

3.5.1 Monthly Call Counts

Refer to Appendix C – Monthly Call Count for PSAP call statistics. The numbers represent the total call count for each PSAP. These numbers are essential for reviewing comparisons to incoming call volumes that result in calls for service.

3.5.2 Annual Dispatched Calls Statistics

Refer to Appendix D – Annual Dispatched Calls Statistics for total calls for service, as well as a breakdown of dispatched calls by discipline (fire, police, medical). These numbers are essential for extrapolating the number of case reviews needed to meet QA goals for each PSAP. Note that there were two PSAPs that did not submit this detailed information. However, their respective call counts from Appendix C were used in lieu of this information.

3.5.3 Telecommunicators Requiring EFD & EPD Certification Training

Refer to Appendix E – Telecommunicators Requiring EFD & EPD Certification Training for the number of telecommunicators by PSAP that would be required to receive the fire and police certification training. The number of potential trainees as reported by the PSAPs is calculated to be approximately

484. Biddeford and Sanford PSAPs did not supply their telecommunicator numbers. However, their respective staff numbers have been approximated for this purpose. This total trainee numbers includes full time and part time employees as well as working supervisors. Certification training usually consists of three days (24 hours) for each protocol system. However, it should be noted that if the fire and police certification training occur within six months of each other, the training period would be shortened from six to five days (three days for police, two for fire). This assumes that the NAED fire and police certification courses would be offered to PSAP staff. It should also be noted that the quote from Priority Dispatch for EFD and EPD certification training allowed for 525 telecommunicators using the shortened training period of five days.

3.5.4 Current EMD Quality Assurance Reviewers

Refer to Appendix F – Current EMD Quality Assurance Reviewers for data concerning the current resources committed to EMD QA for each of the PSAPs. Calculations are based on the information submitted by the PSAPs which includes how many QA reviewers are at each PSAP, and the amount of time spent in the QA case review process. In addition, the approximate costs of existing personnel performing the QA function are calculated on a hypothetical annual cost of $70,000 per resource. The prorated costs of existing resources performing QA case review on EMD calls only, is about $465,000 per year.

3.5.5 Quality Assurance Case Review Statistics – Maine PSAPs

Refer to Appendix G – Quality Assurance Case Review Statistics – Maine PSAPs for data concerning estimated case review for all three protocol disciplines (fire, police, medical). Also shown is the percentage of call volume by call type, with police call volume being the largest at about 83% of the total call volume. This chart also breaks out the number of calls per discipline that would be eligible for case review, according to the NAED accreditation case review criteria. In short, if all three protocol systems were implemented today, the total number of calls that would require review would be approximately 1,869 calls per week, or about 97,188 calls per year.

3.5.6 Quality Assurance FTE Allocations Per PSAP For EFD, EPD & EMD

Refer to Appendix H – Quality Assurance FTE Allocations Per PSAP For EFD, EPD & EMD for data concerning the number of Full-Time Equivalent (FTE) positions that would be required to meet the annual case review demand under a fully implemented EFD, EPD and EMD program. Should the state assume responsibility for QA case review for all three disciplines, the state run QA unit would require approximately **17.8** FTEs. If the average cost of staffing each position is $70,000, then the overall cost of the QA unit would be approximately **$1,246,400** per year.

3.5.7 Quality Assurance FTE Allocations Per PSAP For EFD & EPD Only

Refer to Appendix I – Quality Assurance FTE Allocations Per PSAP For EFD & EPD Only for data concerning the number of FTEs that would be required to meet the annual case review demand under a fully implemented EFD & EPD only program. Should the state assume responsibility for QA case review for EFD & EPD only (i.e., EMD case review remains at the PSAP level), the state run QA unit would require approximately **11.181** FTEs. If the average cost of staffing each position is $70,000, then the overall cost of the EFD and EPD only QA unit would be approximately **$783,000** per year.

3.6 Implementation Options

There are three implementation options offered for consideration. Refer to Appendix L – Detailed Implementation Plan Options.

3.6.1 Option 1: One-Time Approach to Implementation

For a one-time implementation of the entire costs associated to add two additional protocol systems to Maine PSAPs, refer Appendix J – Potential Implementation Costs. This hypothetical quote from PDC includes potential costs associated to a complete statewide implementation. This quote was requested based on the new QA case review service that Priority Dispatch offers for its protocol users. This was deemed significant for inclusion in the PDC quote for consideration. The following represents most of the elements associated to a statewide implementation of the fire and police protocol systems, and also takes into account existing EMD certified telecommunicators as well as the annual licensing Extended Services Plan (ESP) fees associated to the existing EMD protocol system:

- Fire and Police ProQA® software for 137 PSAP and 14 training workstations
- Client server (Xlerator) software for 26 PSAPs
- AQUA™ EFD and EPD modules for 26 PSAPs
- Printed Protocol materials that include 137 EFD and EPD card sets, 100 QA guides, 2000 Field Responder Guides, and 5000 SEND protocol cards (police)
- Training Days – 525 telecommunicator fire and police certifications (5 day courses), 20 ProQA® training days, 5 AQUA™ training days, 150 implementation support and Quality Improvement Unit (QIU) training and consulting days
- Technical support including 26 technical evaluation days (1 day per PSAP), 26 software support and installation days (1 per PSAP), 52 on-site “go-live” support days (2 per PSAP)
- On-site support and travel expenses – 94 days
- Extended Service Plan (ESP) for one year that includes EMD, EFD, & EPD
- Quote for Case Review for statewide EFD & EPD
- Quote for Case Review for statewide EMD, EFD & EPD

The quote supplied by PDC for a complete implementation, which includes one year of EFD and EPD case review is **$3,489,880.**

An additional quote that includes a complete implementation as well as one year of EMD, EFD, and EPD case review is **$3,976,080.**

There will also be recurring charges for maintenance, recertification, and continuing education materials over subsequent years. These recurring charges are estimated to be in the range of **$310,000** per year.

As there are currently no other vendors that can offer third party case review and QA, no other quotes were solicited.

3.6.2 Option 2: Multi-Year Plan Approach

The multi-year plan approach may be logistically and financially more realistic compared to a one-time all or nothing approach.

The multi-year approach for implementation might involve a phased approach with areas of the state divided into three implementation zones, with EFD and EPD rolled out in each zone and completed in every respect prior to moving to each remaining zone.

Another consideration would be to complete the EFD portion of the roll out across the state in year 1. Once PSAP staff have adjusted to the EFD protocol, and have mastered both EMD and EFD, then EPD would be rolled out. This would likely occur in year 2.

As previously stated, the EPD protocol system is the most difficult to master. It would make sense to introduce EFD first, followed by EPD.

If the state commits to a phased implementation spread over a fixed time period (i.e., 3 years), implementation costs could be negotiated to be paid according to an agreed to phased-centric payment cycle.

3.6.3 Option 3: Voluntary PSAP Participation

There are PSAPs in Maine that have expressed an interest in becoming beta test sites for the new protocols. Implementation and funding for a beta-style approach, although logistically simpler, does not satisfy the need to improve the standard of care and practice across the state. Understandably, the beta-style approach is easier to fund from the existing surcharge fund. However, it is recommended that Option 3 should only be considered if significant barriers to considering Options 1 and 2 arise.

3.6.4 Recommendations Pertaining to Protocol Roll Out

Recommendation #2 – **Option 2: Multi-Year Implementation** – It is recommended that a multi-year implementation plan be considered for the introduction of fire and police protocol systems.

Detail: The multi-year implementation should involve a phased approach. The state could be divided into three implementation zones, with EFD and EPD rolled out in each zone and completed in every respect prior to moving to each remaining zone. Another option would be to complete the EFD portion of the roll out across the state in year 1. Once PSAP staff have adjusted to the EFD protocol, and have mastered both EMD and EFD, then EPD would be rolled out. This would likely occur in year 2.

Recommendation #3 – Phased Introduction of Fire and Police Protocols – It is recommended that the first phase of the protocol implementation consist of EFD only, followed by the implementation of EPD.

Detail: The EPD protocol system is the most difficult to master; therefore the protocol roll out should introduce EFD first, followed by EPD.

3.6.5 Implementation Costs Analysis

Refer to Table 1 – Summary of Potential Implementation Costs, as supplied by Priority Dispatch, for a breakdown of telecommunicator certification training, QA training, and any other training related implementation costs.

ITEM	One-time Capital Costs	Annual Recurring Costs
Dispatch Software	$1,186,200	
QA Software	$41,600	
Printed Protocol Materials	$146,430	
Training & Project Management	$869,250	
Extended Service Plan (EMD, EFD, EPD)		$274,000
Case Review (EFD, EPD)		$972,400
Case Review (EMD, EFD, EPD)		$1,458,600
Total Capital Costs:	**$2,243,480**	
Total Recurring QA Costs (EFD, EPD):		**$1,246,400**
Total Recurring QA Costs (EMD, EFD, EPD):		**$1,732,600**
Aggregate Year 1 Costs (EFD, EPD):	**$3,489,880**	
Aggregate Year 1 Costs (EMD, EFD, EPD):	**$3,976,080**	

Table 1 – Summary of Potential Implementation Costs

Capital Costs – The middle column of Table 1 outlines the one-time capital costs associated to an EFD and EPD implementation. The total of **$2,243,480** applies to software, printed materials and consulting fees.

Recurring Costs – The right hand column of Table 1 outlines the recurring costs associated to annual licensing fees referred to as the Extended Service Plan (ESP), as well as the costs associated to outsourced case review.

- If case review *was not* outsourced, the only recurring cost would be the ESP fee of **$274,000** which includes all three protocol systems.
- If the ESP and case review costs for EFD and EPD are combined, then the annual recurring cost would be approximately **$1,246,400**.
- If the ESP and case review costs for EMD, EFD and EPD are combined, then the annual recurring cost would be approximately **$1,732,600**.

Aggregate Costs – The two bottom rows of Table 1 show the aggregate costs of implementation.

- The aggregate first-year costs of implementing EFD, EPD and outsourcing EFD and EPD case review is **$3,489,880**.
- The aggregate first-year costs of implementing EFD, EPD and outsourcing EMD, EFD, and EPD case review is **$3,976,080**.

3.6.6 Recommendations Pertaining to Procurement

Recommendation #4 – Sourcing the Three Protocol Systems – It is strongly recommended that the EMD, EFD, and EPD protocol systems be sourced from the same supplier.

Detail: The value in sourcing the protocol systems from the same supplier ensures that differences in the functionality of each protocol discipline system are minimized. This ensures ease of learning the similarities of each discipline. Since most protocol systems are software based, the flow of call processing and the cognitive skills required for navigating through the systems become much more intuitive.

Recommendation #5 – Meeting the Four Essential Objectives of Call Processing – It is recommended that the protocol system adopted for EFD and EPD satisfy the four essential objectives of call processing.

Detail: There are four essential objectives of emergency call processing that are considered fundamental and mandatory components of every emergency call. The supplier of the protocol system must ensure that these objectives are achieved for every call. The four objectives are:

1. Determining What Has Happened,
2. Assessing Scene Safety,
3. Initiating An Appropriate Response, and
4. Giving Instructions to the Caller.

Recommendation #6 – Protocol Software Systems – It is recommended that the protocol system adopted for EFD and EPD are software based, and that the appropriate Computer Aided Dispatch (CAD) interfaces are installed at all telecommunicator workstations.

Detail: The complexities of the protocol systems and the volume of information associated to police calls for service are better managed using call processing software. Intuitive based systems provide recommended instructions for callers, and make caller management easier. As well, protocol software systems are capable of providing detailed telecommunicator actions associated to processing calls for service. Another key component of the functioning of the software system is a CAD interface that provides the integration pathways between the CAD and the software. The supplier of the protocol software must ensure that a functioning interface exists for PSAP CAD systems.

3.6.7 QA Cost Analysis

Refer to Table 2 – NAED Quality Assurance Case Review. The QA case review criteria applied to the QA case review, and cost analysis in this report, are based on the statistical criteria established by the NAED for accreditation levels of case review.

Annual Call Volume	Cases Per Discipline Per Week	Cases Per Discipline Per Year
Less than 1300	All Cases	All Cases
1300 to 43,332	25 Cases	1300 Cases
43,333	3%	3%
100,000	2.752%	2.752%
200,000	2.314%	2.314%
300,000	1.876%	1.876%
400,000	1.438%	1.438%
500,000+	1%	1%

Table 2 – NAED Quality Assurance Case Review

It could be argued that the NAED standard may be too ambitious for Maine PSAPs to achieve. However, these levels are currently being followed for EMD case review. If the NAED EFD and EPD protocol systems are chosen, and if accreditation for Maine PSAPs is the vision of the state, then the numbers reflected in Table 2 would eventually apply to all PSAPs.

3.6.7.1 PSAP Employees Performing QA – In an effort to analyze current and future QA case review costs, it was necessary to determine the costs to PSAPs of the existing case review and QA program. PSAPs were requested to submit how many certified QA personnel on staff, as well as an estimate as to how much effort is being committed to case review. Refer to Appendix F – Current EMD Quality Assurance Case Review Statistics for a breakdown of PSAP QA resources and an extrapolation of current QA costs. Table 3 (below) summarizes the information in Appendix F, showing that there are about 66 certified QA personnel costing PSAPs approximately **$475,000** annually in the performance of case review.

3.6.7.2 State Employees Performing QA – Table 3 also shows the number of FTE equivalents that would be required to perform case review at the state level. The cost estimations are based on the reported dispatched events from each PSAP. The volume of calls that require case review is based on the current NAED standard as outlined in Table 2 – NAED Quality Assurance Case Review. A formula for establishing case load and output for each FTE was developed in conjunction with several current QA personnel performing these duties. The formula assumes that the average QA resource can review five cases per hour, seven hours a day. Assuming that the QA resource is available for 60% of the annual hours available for work, determines the actual output of each FTE. The annual case review output of each FTE would be determined as follows:

5 cases/hour X 7 hours X 5 days per week X 52 weeks per year X .60 = **5460 Cases per FTE per year**

3.6.7.3 EFD & EPD Only Case Review – If there are 61,048 EFD and EPD cases per year in Maine that require review, and if this work was to be performed by the state, then the number of QA case reviewers for EFD and EPD only would be:

61,048 cases per year / 5460 cases per FTE per year = **11.181 FTEs**

The cost of supporting 11.181 FTEs is determined by assuming an annual rate of $70,000 per FTE:

11.181 FTEs X $70,000 = **$783,000**

3.6.7.4 EMD, EFD & EPD Case Review – If there are 97,100 EMD, EFD, and EPD cases per year in Maine that require review, and if this work was to be taken over by the state, then the number of QA case reviewers for the three protocol systems would be:

97,100 cases per year / 5460 cases per FTE per year = **17.8 FTEs**

The cost of supporting 17.8 FTEs is determined by assuming an annual rate of $70,000 per FTE:

17.8 FTEs X $70,000 = **$1,246,000**

3.6.7.5 Outsourcing Case Review – Table 3 also shows the costs associated to outsourcing QA case review to a third party. Since Priority Dispatch is the only third party entity offering case review services, the numbers that appear in Table 3 were gleaned from the quote that appears in Appendix J – Potential Implementation Costs. Outsourcing case review costs are as follows:

- Outsourcing EFD and EPD case review is estimated to be approximately **$972,000**
- Outsourcing EMD, EFD, and EPD case review is estimated to be approximately **$1,459,000**

QA Resource	EMD Only (Current)		EFD & EPD Only		EMD, EFD, EPD	
	FTE's	Prorated Costs	FTE's	Costs	FTE's	Costs
PSAP	66	$475K*	TBD	TBD	TBD	TBD
State Employees	N/A	N/A	11.181	$783K	17.8	$1,246K
Priority Dispatch Corp	N/A	N/A	N/A	$972K	N/A	$1,459K

Table 3 – Annual QA Cost Analysis Recap

*Note - Prorated costs based on an aggregate hourly commitment of 1152 hours per month @ annual salary of $70,000, or an average hourly rate of $33.65 (i.e. 1152 X 12 X $33.65 = $465,177.60).

3.6.7.6 Pros and Cons of Case Review Strategies – As expected, there are predictable pros and cons of case review strategies. PSAPs are currently being challenged to meet the case review requirements for EMD. It would follow that PSAPs would be unable to accommodate the demand of a significant increase in their case review workload. Ideally, resources would be found at the PSAP level to deal with all case review. However, shifting the responsibility for case review away from the PSAPs may be the most cost effective solution to this challenge.

Shifting case review away from the PSAP and assigning this responsibility to a non-PSAP entity has certain drawbacks. The sense of ownership of the case review function is lost. Objectivity and quality of case review by a third party (either at the state or vendor level) may be subject to questioning, particularly if there is a sense that case reviews are not being done according to established standards. In addition, there are the logistics of choosing cases for review, and making them available to the third party reviewers. In some cases, the third party reviewer has complete access to PSAP audio logging systems, and can randomly select calls for review. In other cases, calls are selected by the PSAP and placed on a server that is accessible by the reviewing entity. Some PSAPs choose to select the calls for review, and send the audio files to the reviewing entity by email.

Irrespective of where case review occurs, every PSAP needs at least one designated employee to effectively manage case review outcomes. This means reviewing the results of case reviews and taking affirmative action with PSAP staff to deal with compliance to protocol issues. If EMD case review remains with the PSAPs, and should EFD and EPD case review be outsourced, the workload of the existing QA PSAP resources should expect an increase in duties in this regard.

3.6.8 Recommendations Pertaining to Quality Assurance & Case Review

Recommendation #7 – EMD Quality Assurance & Case Review – It is recommended that quality assurance and case review for EMD continue to be conducted at the PSAP level.

Detail: Generally, the case review and QA process established for EMD is being well supported by the certified QA reviewers at each PSAP; however, the addition of two more protocol systems, and the case load associated to them, cannot be achieved at the PSAP level without additional resources. In the interim, case review for EMD must be ongoing. It is also of significant value to ensure that qualified QA staff is present to ensure the outcomes of the QA processes (re-education, remediation, recertification, etc.). Even if case review and QA for EFD and EPD is outsourced, the requirement for an on-site PSAP QA specialist will continue to exist, as a local resource would be required to select the cases for review, as well as the need to follow up with telecommunicators for their individual case reviews.

Recommendation #8 – EFD, EPD Quality Assurance & Case Review – It is recommended that a quality assurance and case review unit be established at the state level, in conjunction with the phased roll-out of the EFD and EPD protocols.

Detail: Although costs associated to outsourcing case review and QA may be in the same range as creating a team of case reviewers, there are benefits to retaining ownership of case review within Maine. Third party case review is a fairly new concept, and anecdotally is meeting with mixed reviews. Issues such as philosophical differences between anonymous case reviewers, technological limitations, as well as confidentiality of information remain. It would be more appropriate to create a case review team that would become familiar with the dynamics and idiosyncrasies of individual PSAPs, and establish relationships with them. The logistics of how the team would function would need to be developed as the new protocol systems are

rolled out. Perhaps the strongest argument for this approach is that rather than funding a private, out-of-state commercial firm, the creation of 18 new jobs within Maine is the more desirable choice.

Recommendation #9 – EFD, EPD Quality Assurance & Case Review – It is recommended that quality assurance and case review for EFD and EPD begin immediately upon their respective implementations.

Detail: PSAPs that delay the implementation of case review and QA processes, limit the effectiveness of the new protocol systems. Expectations must be set at the beginning of any protocol implementation that case review and QA is an absolute component of the system, and that all PSAP staff understand this requirement. PSAPs that establish a "period of grace" between implementation and commencing of case review, only do themselves and their stakeholders a disservice.

3.6.9 Recommendations Pertaining to Quality Assurance & Case Review

Recommendation #10 – **Funding** – It is recommended that a multi-year implementation funding plan be considered for the introduction of fire and police protocol systems, and that the costs of implementation be funded by the 9-1-1 surcharges.

Detail: A multi-year approach to implementation would allow more flexibility for funding issues. It must be assumed that the RFP process would include accommodation for a multi-year implementation that would be funded according to pre-established and agreed to project milestones. If the only funding source available for this project is the 9-1-1 surcharge fund, then that would be the obvious for sources of funds for this effort.

3.7 Establishment of Oversight Committees

The establishment of oversight committees at various levels of a protocol implementation of this magnitude is essential to the overall success of the project. The various committees established for the implementation project will:

- Oversee all aspects of the implementation
- Provide ongoing post-implementation guidance and administration required to ensure continuity of PSAP operations as the implementation matures and becomes entrenched in the day to day delivery of emergency services
- Provide a venue for intercommunications between committees

The Bureau is currently established as the policy center for emergency communications and is best positioned to assume responsibility for the establishment of a statewide QA program, as well as the oversight of the various stakeholders impacted by the introduction of the fire and police protocol systems, the evolution of protocol use, and in particular the integration and expansion of QA across the state. The committee structure recommended in this report presents a necessary and practical

approach that provides a layered approach to deal with the various issues that will arise with the introduction of protocols and QA programs.

3.7.1 State of Maine Emergency Communications Steering Committee (MECSC)

The State of Maine Emergency Communications Steering Committee (MECSC) oversees protocol and QA operations throughout the state. It is a senior manager's advisory group that reports to the Public Utilities Commission. As each PSAP implements the new protocol systems, statewide issues are certain to emerge and will need to be addressed. Global issues and solutions for the state are administered and dealt with in a cohesive and coordinated manner. As local PSAPs and emergency stakeholders become more and more affected by the new systems, issues such as the standardization of response codes, technology challenges, as well as the impact on PSAP operations and personnel require a central point of contact. The state committee is required to deal with various issues that cannot be resolved at any other level in the committee structure. At the beginning of the project, it will meet frequently, and will assume a strong leadership role in the initial implementation, including direct involvement in the logistics and management of the project. As the implementation evolves, the state committee's focus will shift to an advisory role that oversees the establishment of policies, procedures, and applicable rules. The MECSC's membership includes but is not limited to representatives from the following entities:

- Public Utilities Commission
- Department of Public Safety
- PSAP Representative

3.7.2 Emergency Communications Review Committee (ECRC)

The Emergency Communications Review Committee (ECRC) reports to the MECSC. It is a senior manager's advisory group. Each local PSAP Operations Review Committee has representation on the ECRC. It deals with all PSAPS on protocol and QA matters on a regular basis. It makes recommendations to the MSC on policy and procedure issues, as well as operations issues concerning both PSAPs and emergency responders. The ECRC reviews PSAP reports on global issues that arise from protocol use, and monitors compliance and QA issues. It coordinates statewide Continuing Education and retraining efforts. It meets on a regular basis, and assumes a strong advisory role to the MECSC making recommendations concerning all aspects of call processing and dispatch. The ECRC's membership includes but is not limited to representatives from the following entities:

- PSAPs
- Emergency Services Communications Bureau
- Enhanced 9-1-1 Advisory Council
- Maine Emergency Medical Services
- Law Enforcement
- Fire Services
- Medical Authority
- Quality Assurance Program
- Information Technology

3.7.3 PSAP Dispatch Review Committee (PDRC)

The local PSAP Dispatch Review Committee reports to the ECRC. It is a middle management working group. Each PSAP PDRC deals with internal protocol use, compliance and QA issues on a regular basis. It reviews PSAP performance and compliance issues, and implements Continuing Education to resolve any shortcomings. It reviews both problematic and exemplary cases. It makes recommendations to the ECRC on operations issues concerning call taking and dispatch methodologies. It meets on a regular basis, and assumes an operations advisory role concerning all aspects of call processing. The PDRC's membership includes but is not limited to:

- PSAP Supervisors
- QA personnel
- Trainers
- Telecommunicator Representative
- Local Emergency Services (Police, Fire, EMS)
- Information Technology

3.7.4 Committee Organization Chart

The following is a graphic representation of the recommended committee organization.

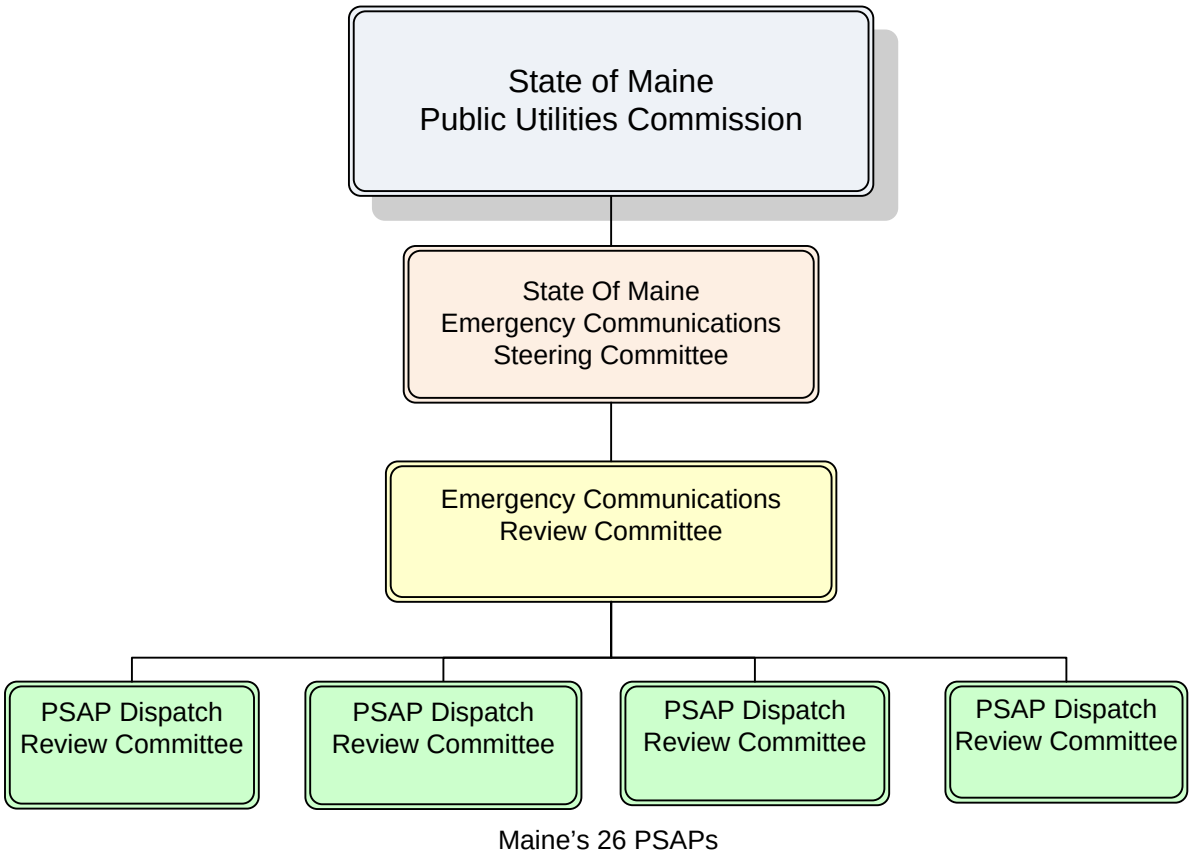


Figure 1 – Recommended Committee Organization Chart

3.7.5 Recommendations Pertaining to Committee Organization

Recommendation #11 – **Committee Organization** – It is recommended that a tiered committee organization consisting of an Emergency Services Steering Committee, an Emergency Communications Review Committee, and 26 PSAP Dispatch Review Committees be established to oversee the implementation and administration of Maine's protocol and QA program.

Detail: The establishment of oversight committees at various levels is essential to the overall success of the project. The committees will oversee all aspects of the implementation, provide ongoing post-implementation guidance and administration required to ensure continuity of PSAP operations, and provide a venue for intercommunications between committees.

3.7.6 Example of PSAP Protocol Implementation Project Gantt Chart

Refer to Appendix M – Example of Implementation Project Gantt Chart for a typical representation of a single PSAP protocol implementation project plan. It shows the various milestones and timelines of a three month implementation that begins the first week of April 2012 and is completed June 2012.

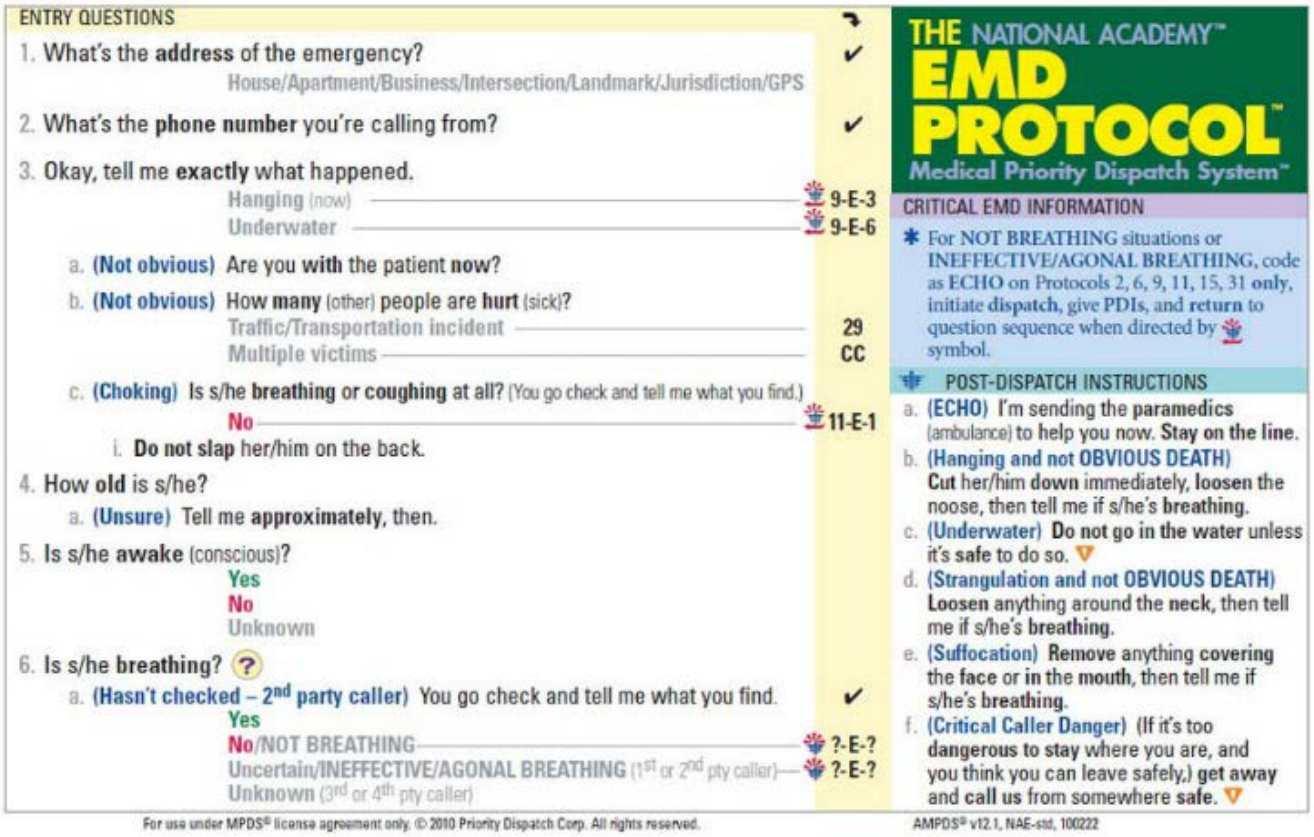
Accreditation processes, which are not included in this chart, would stretch the end-to-end implementation to a five month period. Since accreditation is a significant and optional challenge for any PSAP, it has not been included in this time line.

Replication of this timeline would be applied to every PSAP in whatever sequence of implementation decided by the Bureau.

Appendix A – NAED Case Entry For Medical, Fire & Police Protocol Systems

Appendix A – NAED Case Entry For Medical, Fire & Police Protocol Systems

EMD Case Entry Protocol:



ENTRY QUESTIONS

1. What's the **address** of the emergency? ✔
   House/Apartment/Business/Intersection/Landmark/Jurisdiction/GPS
2. What's the **phone number** you're calling from? ✔
3. Okay, tell me **exactly** what happened.
   - Hanging (now) — 9-E-3
   - Underwater — 9-E-6
   a. **(Not obvious)** Are you **with** the patient **now**?
   b. **(Not obvious)** How **many** (other) people are **hurt** (sick)?
      - Traffic/Transportation incident — 29
      - Multiple victims — CC
   c. **(Choking)** Is s/he **breathing** or **coughing** at all? (You go check and tell me what you find.)
      - No — 11-E-1
      i. **Do not slap** her/him on the back.
4. How **old** is s/he?
   a. **(Unsure)** Tell me **approximately**, then.
5. Is s/he **awake** (conscious)?
   - Yes
   - No
   - Unknown
6. Is s/he **breathing**? (?)
   a. **(Hasn't checked – 2nd party caller)** You go check and tell me what you find. ✔
      - Yes
      - No/NOT BREATHING — ?-E-?
      - Uncertain/INEFFECTIVE/AGONAL BREATHING (1st or 2nd pty caller) — ?-E-?
      - Unknown (3rd or 4th pty caller)

THE NATIONAL ACADEMY™
EMD PROTOCOL™
Medical Priority Dispatch System™

CRITICAL EMD INFORMATION

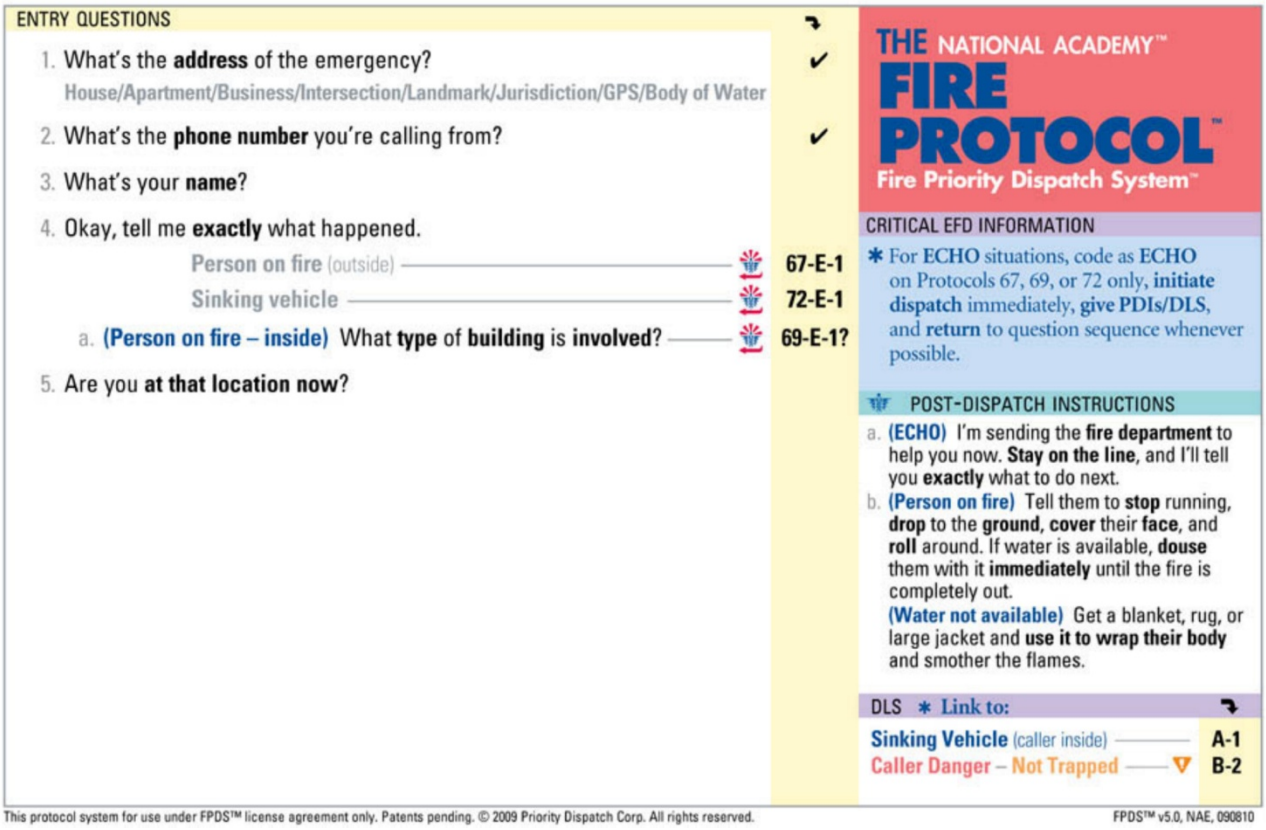
* For NOT BREATHING situations or INEFFECTIVE/AGONAL BREATHING, code as ECHO on Protocols 2, 6, 9, 11, 15, 31 only, initiate dispatch, give PDIs, and return to question sequence when directed by ✱ symbol.

POST-DISPATCH INSTRUCTIONS

a. **(ECHO)** I'm sending the **paramedics** (ambulance) to help you now. **Stay on the line.**
b. **(Hanging and not OBVIOUS DEATH)** **Cut** her/him **down** immediately, **loosen** the noose, then tell me if s/he's **breathing.**
c. **(Underwater)** **Do not go in the water** unless it's **safe** to do so. ▽
d. **(Strangulation and not OBVIOUS DEATH)** **Loosen** anything around the **neck,** then tell me if s/he's **breathing.**
e. **(Suffocation)** **Remove** anything **covering** the **face** or **in** the **mouth,** then tell me if s/he's **breathing.**
f. **(Critical Caller Danger)** (If it's too **dangerous to stay** where you are, and you think you can leave safely,) **get away** and **call us** from somewhere **safe.** ▽

AMPDS® v12.1, NAE-std, 100222

EFD Case Entry Protocol:



ENTRY QUESTIONS

1. What's the **address** of the emergency? ✔
   House/Apartment/Business/Intersection/Landmark/Jurisdiction/GPS/Body of Water
2. What's the **phone number** you're calling from? ✔
3. What's your **name**?
4. Okay, tell me **exactly** what happened.
   - Person on fire (outside) — 67-E-1
   - Sinking vehicle — 72-E-1
   - a. **(Person on fire – inside)** What **type** of **building** is **involved**? — 69-E-1?
5. Are you **at that location now**?

THE NATIONAL ACADEMY™
FIRE PROTOCOL™
Fire Priority Dispatch System™

CRITICAL EFD INFORMATION

* For ECHO situations, code as ECHO on Protocols 67, 69, or 72 only, **initiate dispatch** immediately, **give PDIs/DLS**, and **return** to question sequence whenever possible.

POST-DISPATCH INSTRUCTIONS

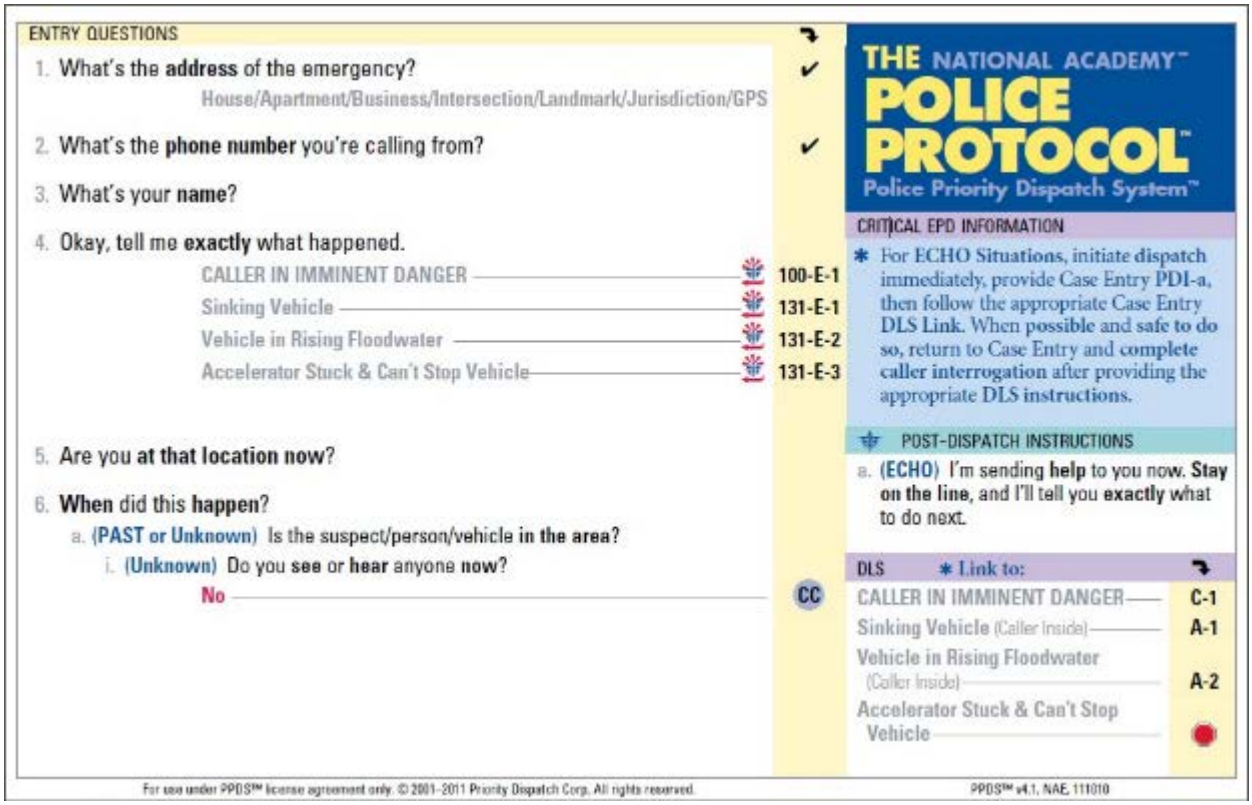
a. **(ECHO)** I'm sending the **fire department** to help you now. **Stay on the line**, and I'll tell you **exactly** what to do next.
b. **(Person on fire)** Tell them to **stop** running, **drop** to the **ground**, **cover** their **face**, and **roll** around. If water is available, **douse** them with it **immediately** until the fire is completely out.
(Water not available) Get a blanket, rug, or large jacket and **use it to wrap their body** and smother the flames.

DLS * Link to:

- **Sinking Vehicle** (caller inside) — A-1
- Caller Danger – Not Trapped — B-2

FPDS™ v5.0, NAE, 090810

EPD Case Entry Protocol:



ENTRY QUESTIONS

1. What's the **address** of the emergency?
   House/Apartment/Business/Intersection/Landmark/Jurisdiction/GPS
2. What's the **phone number** you're calling from?
3. What's your **name**?
4. Okay, tell me **exactly** what happened.
   - CALLER IN IMMINENT DANGER — 100-E-1
   - Sinking Vehicle — 131-E-1
   - Vehicle in Rising Floodwater — 131-E-2
   - Accelerator Stuck & Can't Stop Vehicle — 131-E-3
5. Are you **at that location now**?
6. **When** did this **happen**?
   a. **(PAST or Unknown)** Is the suspect/person/vehicle **in the area**?
      i. **(Unknown)** Do you **see** or **hear** anyone **now**?
         No — CC

THE NATIONAL ACADEMY™
POLICE PROTOCOL™
Police Priority Dispatch System™

CRITICAL EPD INFORMATION

* For **ECHO Situations**, initiate dispatch immediately, provide Case Entry PDI-a, then follow the appropriate Case Entry DLS Link. When **possible** and **safe to do so**, return to Case Entry and **complete caller interrogation** after providing the appropriate DLS instructions.

POST-DISPATCH INSTRUCTIONS

a. **(ECHO)** I'm sending **help** to you now. **Stay on the line**, and I'll tell you **exactly** what to do next.

DLS * Link to:

- CALLER IN IMMINENT DANGER — C-1
- Sinking Vehicle (Caller Inside) — A-1
- Vehicle in Rising Floodwater (Caller Inside) — A-2
- Accelerator Stuck & Can't Stop Vehicle

PPDS™ v4.1, NAE, 111010

Appendix B – Excerpt From State of Maine – Call Transfer Policy Template

Appendix B – Excerpt From State of Maine - Call Transfer Policy Template

SUBJECT: **CALL TRANSFER PROCEDURE**	NUMBER:
RESCINDS:	EFFECTIVE DATE:
REFERENCE:	
DISTRIBUTION:	REVIEW DATE:
STANDARD:	

I. PURPOSE

The purpose of this policy is to establish call transfer procedures for PSAPs.

II. POLICY

It is the policy of this agency to provide the highest quality response to all emergency calls and to ensure that calls requiring transfer to another PSAP or dispatch facility are processed efficiently and in accordance with the procedures established by this directive. This policy, which has been created and approved by the State of Maine, is intended to standardize and streamline the call transfer process, as well as define areas of responsibility. It is also designed to ensure that call transfers are done as seamlessly as possible, while also allowing the ETC to provide necessary instructions to the caller.

III. DEFINITIONS

A. Emergency Services Communication Bureau (ESCB): The Bureau within the Maine Public Utilities Commission overseeing the 9-1-1 system in Maine.

B. Emergency Communications Specialist (ECS)

C. Emergency Communications Specialist Supervisor (ECSS)

D. Emergency Telecommunicator (ETC)

E. Public Safety Answering Point (PSAP): A place where 9-1-1 calls are received and transferred to the appropriate dispatch center for the emergency services requested.

F. Automatic Number Identification (ANI): The ability of the 9-1-1 system to display the phone number of the incoming 9-1-1 call.

G. Automatic Location Identification (ALI): The ability of the 9-1-1 system to display the subscriber address information of the incoming 9-1-1 call.

H. Dispatch Agency: An agency responsible for dispatching police, fire, and/or EMS units.

IV. GENERAL

A. Ownership – When a call arrives at (PSAP name), it is considered to be owned by this PSAP, and we are therefore obligated to take charge of the call, take immediate action, and provide all necessary assistance to the caller.

B. Non-Jurisdictional Calls – In the event that an emergency call is received by this agency that is not within the jurisdiction in which we provide police, fire or emergency medical dispatch service, this call transfer procedure shall be used to process the call.

C. Caller Management – In order to effectively manage the caller, as well as minimize caller frustration, ETCs need to preface repeated questions with a reason. Refer to Exhibit A – Call Transfer Procedure - for examples of suggested language.

D. Quality Assurance – Rules regarding quality assurance (QA) have been established to ensure the highest level of care a practice for our citizens. For clarification purposes, QA starts when the receiving PSAP begins caller interrogation.

E. ETC Orientation - It is recommended that ETCs thoroughly review the chart, and become familiar with its content. It is also recommended that ETCs use role playing techniques (with typical call examples) to practice and become familiar with this procedure.

F. Feedback – All PSAP staff are encouraged to report any issues regarding this policy to their immediate supervisor. Feedback includes suggestions for improvement as well as any problematic issues that may surface with its use. Please forward feedback on this policy to info911@maine.gov

V. PROCEDURE

A. Verification of Address – Location of the emergency is crucial to the "where" emergency responders are required to attend. For every call, including each incident of call transfer, the case entry question ***"What is the address of the emergency?"*** shall be posed to the caller. Verification of the address shall be consistent with agency procedures.

1. In order to ensure that complete address verification occurs, and that "location of the event" dispatch errors are minimized, callers shall always be asked to verify their **complete address** including, where appropriate the following:
    a. House number,
    b. Apartment number,
    c. Business name
    d. Intersection,
    e. Landmarks,
    f. Jurisdiction,
    g. GPS coordinates,
    h. City, town or village.

B. Verification of Call-Back Number – Verification of the call-back number is crucial to the reestablishment of contact with the caller. For every call, including each incident of call transfer, the case entry question ***"What's the phone number you are calling from?"*** shall be posed to the caller. Verification of the call back number shall be consistent with agency procedures.

1. In order to ensure that call-back number verification occurs, and that call-back number errors are minimized, callers shall always be asked to verify their call back number.

C. **Determination of Chief Complaint –** Determination of the chief complaint is crucial to the dispatch of the correct emergency resources, as well as the level of response. For every call, including each incident of call transfer, the case entry question ***"Okay, tell me exactly what happened?"*** shall be posed to the caller. Determination of the chief complaint shall be consistent with agency procedures.

1. In order to ensure that the ETC establishes exactly what has happened, and that all scene safety issues have been addressed, and the appropriate response is initiated, callers shall always be asked to describe exactly what has happened.
    a. In most cases, callers do not accurately report all of the facts pertaining to an emergency call. For example, a request for an ambulance may be the result of an assault with a weapon, or some other crime against a person that requires a law enforcement response.
        i. Under no circumstance shall the question, "Do you need police, fire or ambulance?" be posed to a caller.

D. **Unable to Transfer –** If for some reason the line is not transferable, the dispatcher will obtain all necessary details including the caller's name and call back number, and relay all pertinent information to the responsible PSAP as soon as possible. This ensures little or no delay in dispatching help to the caller. Non-transferable medical emergency calls will be processed using the EMD protocol, and another dispatcher shall relay information to the appropriate agency for medical dispatch.

1. Examples of **Unable to Transfer** situations may include phone system outages, 9-1-1 selective router system failures, or problems with the 9-1-1 equipment at the PSAP.

E. **Incorrect Transfer –** In the event that a PSAP transfers an emergency call to (your PSAP) that is not within your jurisdiction:

1. An 'Incorrect Xfer' event (call) shall be created in CAD,
2. The transferring agency shall become the complainant, and
3. The receiving ETC becomes the 'Responsible Officer'.

The same procedure shall be taken with emergency calls received on business lines or non-emergency trunk lines. A brief narrative should also be included as to the nature of the call, the agency that it should have gone to, and any further pertinent information.

F. **EMD Centers –** EMD Centers are licensed by the Maine State Board of Emergency Medical Services. All Public Safety Answering Points (PSAPs) must be licensed as EMD Centers. In addition, non-PSAP dispatch centers may be licensed as EMD Centers.

1. Refer to Exhibit B - Licensed EMD Centers – for a complete list of Maine licensed EMD centers.

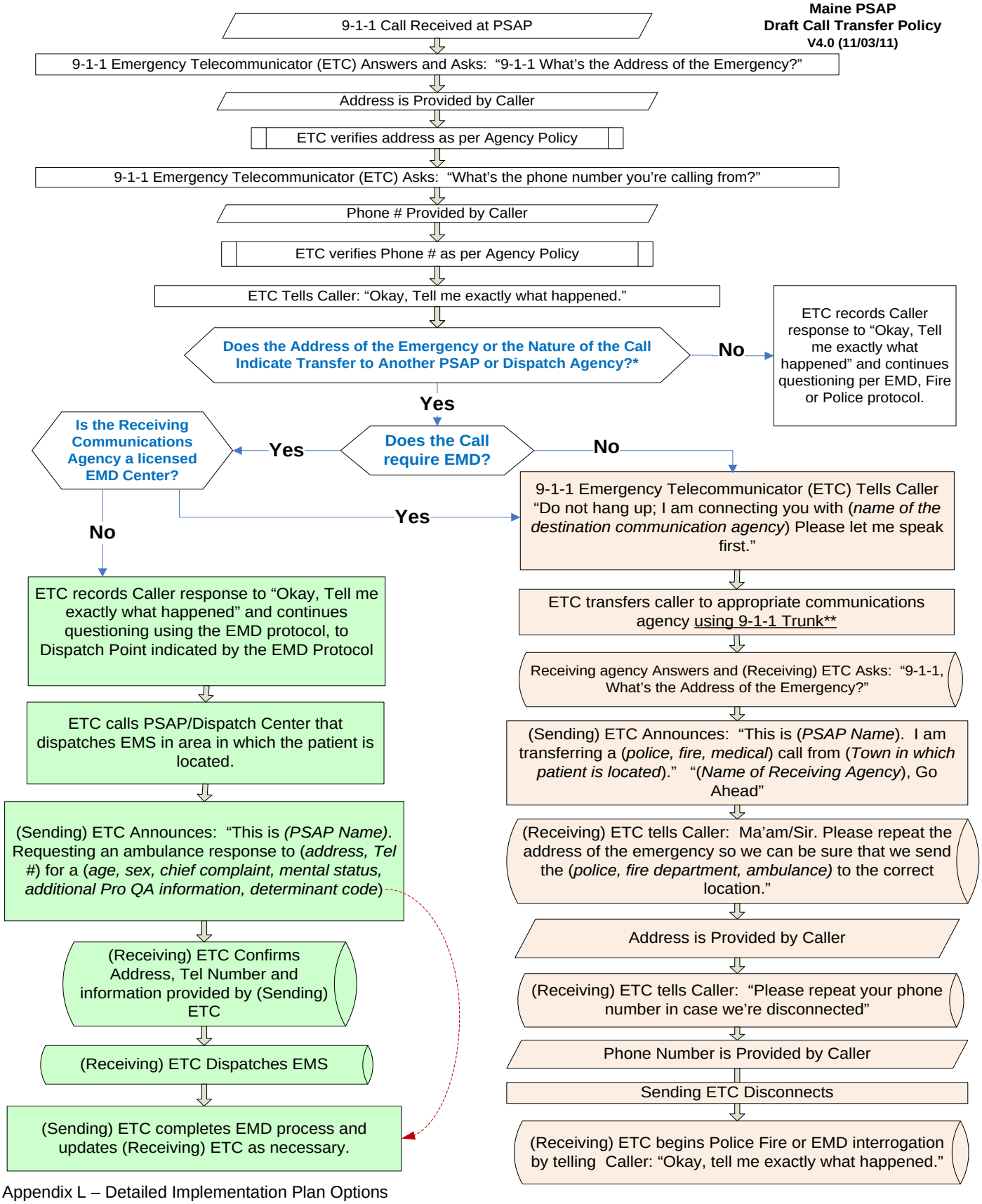
VI. EFFECTIVE DATE:

This Directive is effective immediately, as approved by (your policy authority) on _____day of _____, 20___.

_____, Director
(PSAP name)

Exhibit A - Call Transfer Procedure

Maine PSAP
Draft Call Transfer Policy
V4.0 (11/03/11)



Appendix C – Monthly Call Count

Appendix C – *Monthly Call Count

PSAP	Nov 2010	Dec 2010	Jan 2011	Feb 2011	March 2011	April 2011	May 2011	June 2011	July 2011	Aug 2011	Sept 2011	Oct 2011	Total
Androscoggin Co. SO	824	727	784	635	708	712	830	774	917	1,015	719	798	9,443
Bangor PD	1,456	1,659	1,619	1,499	1,588	1,497	1,700	1,697	2,138	2,116	1,962	1,834	20,765
Biddeford PD	850	787	882	780	914	811	858	896	1,055	1,079	1,004	1,055	10,971
Brunswick PD	708	942	819	775	826	812	871	922	1,128	1,091	924	871	10,689
CMRCC	5,224	5,890	5,820	4,981	5,488	5,325	5,473	5,742	6,820	7,066	5,841	5,822	69,492
Cumberland Co 911	1,783	1,869	1,659	1,474	1,568	1,733	1,805	1,876	2,483	2,414	2,064	1,933	22,661
DPS Gray	10,702	11,565	10,390	10,447	10,858	10,946	12,525	13,502	16,156	16,405	13,455	13,549	150,500
DPS Houlton	787	911	822	747	803	839	766	1,055	1,296	1,053	941	875	10,895
DPS Orono	4,540	5,229	5,047	4,480	4,669	4,709	4,658	5,058	6,274	6,338	5,362	5,299	61,663
Franklin Co. SO	797	829	778	803	859	757	802	821	1,013	1,102	802	779	10,142
Hancock Co. RCC	648	685	617	598	656	705	714	715	968	1,058	724	663	8,751
Knox Co. RCC	1,764	1,845	1,664	1,445	1,677	1,896	1,934	2,280	2,582	2,602	2,181	2,128	23,998
Lewiston/Auburn 911	3038	3189	3,003	2,724	3,098	3,183	3,277	3,694	3,802	4,175	3,585	3,466	40,234
Lincoln Co. 911	1,092	1,230	1,163	912	1,032	1,025	1,001	1,235	1,441	1,595	1,210	1,083	14,019
Oxford Co. RCC	1,585	1,588	1,482	1,360	1,626	1,481	1,596	1,561	1,945	2,026	1,596	1,674	19,520
Penobscot Co. RCC	3147	3411	3,270	2,828	3,199	3,069	3,315	3,280	3,568	3,761	3,292	3167	39,307
Piscataquis Co. SO	369	396	395	324	421	354	408	388	562	472	404	332	4,825
Portland PD	4,728	5,260	4,675	4,326	4,618	5,050	5,493	5,871	6,465	6,777	5,667	5,603	64,533
Sagadahoc Co. Comm	1,023	962	940	838	925	860	1,023	963	1,196	1,121	1,048	1,054	11,953
Sanford PD	1349	1384	1,387	1,328	1,370	1,373	1,556	2,031	2,645	2,493	2,121	2,025	21,062
Scarborough PD	942	821	643	582	670	645	729	807	855	773	632	630	8,729
Somerset Co. RCC	2,510	2,798	2,478	2,364	2,743	2,606	2,643	2,713	2,986	2,903	2,518	2,562	31,824
Waldo Co. RCC	800	871	764	778	754	762	836	846	999	1,156	912	785	10,263
Washington Co. RCC	748	877	670	627	823	733	709	718	850	808	727	771	9,061
Westbrook PD	876	940	902	888	954	923	1,027	932	1,031	1,033	808	881	11,195
York PD	537	515	585	452	490	454	597	647	860	881	694	582	7,294
Totals:	**52,827**	**57,180**	**53,258**	**48,995**	**53,337**	**53,260**	**57,146**	**61,024**	**72,035**	**73,313**	**61,193**	**60,221**	**703,789**

*Source: Emergency Services Communications Bureau

Appendix D – Annual Dispatched Calls Statistics

Appendix D – *Annual Dispatched Calls Statistics

PSAP	Police	Fire	EMS	Total calls per year
Androscoggin Co. SO				23,312
Bangor PD	31,953	1,560	7,590	41,103
Biddeford PD				10,971
Brunswick PD	35,230	1,180	4,649	41,059
CMRCC	63,975	557	3,015	67,547
Cumberland Co. 911				43,041
DPS Gray	40,088	297	1,521	41,906
DPS Houlton	16,142	421	1,660	18,223
DPS Orono				35,152
Franklin Co. SO	11,207	710	4,076	15,993
Hancock Co. RCC				8,904
Knox Co. RCC	39,350	1,741	5,163	46,254
Lewiston/Auburn 911	65,110	6,129	7,793	79,032
Lincoln Co. 911	30,620	2,272	4,800	37,692
Oxford Co. RCC	25,538	2023	5,556	33,117
Penobscot Co. RCC	107,511	8,400	31,426	147,337
Piscataquis Co. SO	1,008	359	1,484	2,851
Portland PD	129,651	72,915		202,566
Sagadahoc Co. Comm	24,308	1,553	3,995	29,856
Sanford PD				21,062
Scarborough PD	25,998		4,833	30,831
Somerset Co. RCC	62,488	1,573	11,604	75,665
Waldo Co. RCC	24,613	1,432	5,119	31,164
Washington Co. RCC	14,636	549	4,091	19,276
Westbrook PD				34,181
York PD				27,164
Totals:	**749,426**	**103,671**	**108,375**	**1,165,259**

*Source: State of Maine Public Safety Answering Points (PSAPs)

Note – High-lighted cells represent predicted or extrapolated information applicable to missing data.

Appendix E – Telecommunicators Requiring EFD & EPD Certification Training

Appendix E – *Telecommunicators Requiring EFD & EPD Certification Training

PSAP	Working Supervisors	Full Time	Part Time
Androscoggin Co. SO	1	8	5
Bangor PD	0	10	10
Biddeford PD	1	8	4
Brunswick PD	1	9	10
CMRCC	0	20	0
Cumberland Co. 911	5	24	7
DPS Gray	0	16	0
DPS Houlton	0	9	0
DPS Orono	0	11	0
Franklin Co. SO	2	8	8
Hancock Co. RCC	0	8	6
Knox Co. RCC	2	10	1
Lewiston/Auburn 911	6	16	3
Lincoln Co. 911	4	10	2
Oxford Co. RCC	4	12	3
Penobscot Co. RCC	4	24	28
Piscataquis Co. SO	1	9	3
Portland PD	5	32	37
Sagadahoc Co. Comm	4	11	0
Sanford PD	1	9	3
Scarborough PD	1	8	2
Somerset Co. RCC	4	12	16
Waldo Co. RCC	3	11	4
Washington Co. RCC	2	8	8
Westbrook PD	1	8	3
York PD	0	8	2
Sub-Totals:	52	319	165
		Total Trainees:	**484**

*Source: State of Maine Public Safety Answering Points (PSAPs).

Note – High-lighted cells represent predicted or extrapolated information applicable to missing data.

Appendix F – Current EMD Quality Assurance Reviewers

Appendix F – Current EMD Quality Assurance Reviewers

PSAP	*EMD QA Reviewers	Time (Hrs) Monthly	Total (Hrs) Monthly	**Annual Prorated Costs
Androscoggin Co. SO	2	60	120	$48,456.00
Bangor PD	1	20	20	$8,076.00
Biddeford PD	1		20	$8,076.00
Brunswick PD	3	6	20	$8,076.00
CMRCC	2		30	$12,114.00
Cumberland Co. 911	5	5	25	$10,095.00
DPS Gray	4		25	$10,095.00
DPS Houlton	2		20	$8,076.00
DPS Orono	3		50	$20,190.00
Franklin Co. SO	2		80	$32,304.00
Hancock Co. RCC	1	40	40	$16,152.00
Knox Co. RCC	4	8	32	$12,921.60
Lewiston/Auburn 911	2	16	32	$12,921.60
Lincoln Co. 911	4	9	36	$14,536.80
Oxford Co. RCC	2	24	48	$19,382.40
Penobscot Co. RCC	5	224	224	$90,451.20
Piscataquis Co. SO	2	8	16	$6,460.80
Portland PD	2	17	34	$13,729.20
Sagadahoc Co. Comm	2		100	$40,380.00
Sanford PD	1		20	$8,076.00
Scarborough PD	1	22	22	$8,883.60
Somerset Co. RCC	4	8	32	$12,921.60
Waldo Co. RCC	3		40	$16,152.00
Washington Co. RCC	5	4	20	$8,076.00
Westbrook PD	5		30	$12,114.00
York PD	2	8	16	$6,460.80
Totals:	**70**	**479**	**1152**	**$465,177.60**

*Source: State of Maine Public Safety Answering Points (PSAPs).
****Annual Prorated Costs** are based on an average annual Full-time Equivalent (FTE) cost of $70,000.

Note – High-lighted cells represent predicted or extrapolated information applicable to missing data.

Appendix G – Quality Assurance Case Review Statistics – Maine PSAPs

Note - high-lighted cells in the table on the following page represent predicted or extrapolated information applicable to missing data.

Appendix G - Quality Assurance Case Review Statistics – Maine PSAPs

PSAP	*Police Calls	% Police	Police QA Cases/ Week	*Fire Calls	% Fire	Fire QA Cases/ Week	*EMD Calls	% EMD	EMD QA Cases/ Week	Total QA Cases/Week	**Total QA Cases/Year
Androscoggin Co. SO			25			10			25	60	3,120
Bangor PD	31,953	77.74%	25	1,560	3.80%	25	7,590	18.47%	25	75	3,900
Biddeford PD			25			10			25	60	3,120
Brunswick PD	35,230	85.80%	25	1,180	2.87%	25	4,649	11.32%	25	75	3,900
CMRCC	63,975	94.71%	36	557	0.82%	11	3,015	4.46%	25	72	3,744
Cumberland Co. 911			25			10			25	60	3,120
DPS Gray	40,088	95.66%	25	297	0.71%	6	1,521	3.63%	25	56	2,912
DPS Houlton	16,142	88.58%	25	421	2.31%	9	1,660	9.11%	25	59	3,068
DPS Orono			25			25			25	75	3,900
Franklin Co. SO	11,207	70.07%	25	710	4.44%	14	4,076	25.49%	25	64	3,328
Hancock Co. RCC			25			10			25	60	3,120
Knox Co. RCC	39,350	85.07%	25	1,741	3.76%	25	5,163	11.16%	25	75	3,900
Lewiston/Auburn 911	65,110	82.38%	36	6,129	7.76%	25	7,793	9.86%	25	86	4,472
Lincoln Co. 911	30,620	81.24%	25	2,272	6.03%	25	4,800	12.73%	25	75	3,900
Oxford Co. RCC	25,538	77.11%	25	2,023	6.11%	25	5,556	16.78%	25	75	3,900
Penobscot Co. RCC	107,511	72.97%	56	8,400	5.70%	25	31,426	21.33%	25	106	5,512
Piscataquis Co. SO	1,008	35.36%	25	359	12.59%	7	1,484	52.05%	25	57	2,964
Portland PD	129,651	64.00%	65	12,150	6.00%	25	60,765	30.00%	35	125	6,500
Sagadahoc Co. Comm	24,308	81.42%	25	1,553	5.20%	25	3,995	13.38%	25	75	3,900
Sanford PD			25			9			25	59	3,068
Scarborough PD	25,998	84.32%	25				4,833	15.68%	25	50	2,600
Somerset Co. RCC	62,488	82.59%	35	1,573	2.08%	25	11,604	15.34%	25	85	4,420
Waldo Co. RCC	24,613	78.98%	25	1,432	4.60%	25	5,119	16.43%	25	75	3,900
Washington Co. RCC	14,636	75.93%	25	549	2.85%	10	4,091	21.22%	25	60	3,120
Westbrook PD			25			25			25	75	3,900
York PD			25			25			25	75	3,900
Totals:	**749,426**	**83.17%**	**753**	**103,671**	**6.33%**	**456**	**108,375**	**16.38%**	**660**	**1,869**	**97,188**

Appendix G – Qualtiy Assruance Case Review Statistics – Maine PSAPs

*Source: Call volume statistics provided by Maine Public Safety Answering Points (PSAPs).

****Total QA Cases/Year** calculated based on reported call volumes and NAED Accreditation criteria.

Appendix H – Quality Assurance FTE Allocation Per PSAP For EFD, EPD & EMD

Appendix H - Quality Assurance FTE Allocation Per PSAP For EFD, EPD & EMD

PSAP	*Total Dispatched Calls/Year	Total Q Cases/Week	Total Q EFD, EPD, & EMD Cases/Year	EFD, EPD, & EMD Q FTE Equivalent	**EFD, EPD, & EMD Q FTE Costs @ $70K
Androscoggin Co. SO	23,312	60	3,120	**0.5714**	**$40,000.00**
Bangor PD	41,103	75	3,900	**0.7143**	**$50,000.00**
Biddeford PD	10,971	60	3,120	**0.5714**	**$40,000.00**
Brunswick PD	41,059	75	3,900	**0.7143**	**$50,000.00**
CMRCC	67,547	72	3,744	**0.6857**	**$48,000.00**
Cumberland Co. 911	43,041	60	3,120	**0.5714**	**$40,000.00**
DPS Gray	41,906	56	2,912	**0.5333**	**$37,333.33**
DPS Houlton	18,223	59	3,068	**0.5619**	**$39,333.33**
DPS Orono	35,152	75	3,900	**0.7143**	**$50,000.00**
Franklin Co. SO	15,993	64	3,328	**0.6095**	**$42,666.67**
Hancock Co. RCC	8,904	60	3,120	**0.5714**	**$40,000.00**
Knox Co. RCC	46,254	75	3,900	**0.7143**	**$50,000.00**
Lewiston/Auburn 911	79,032	86	4,472	**0.8190**	**$57,333.33**
Lincoln Co. 911	37,692	75	3,900	**0.7143**	**$50,000.00**
Oxford Co. RCC	33,117	75	3,900	**0.7143**	**$50.000.00**
Penobscot Co. RCC	147,337	106	5,512	**1.0095**	**$70,666.67**
Piscataquis Co. SO	2,851	57	2,964	**0.5429**	**$38,000.00**
Portland PD	202,566	125	5,460	**1.0000**	**$70,000.00**
Sagadahoc Co. Comm	29,856	75	3,900	**0.7143**	**$50,000.00**
Sanford PD	21,062	59	3,068	**0.5619**	**$39,333.33**
Scarborough PD	30,831	50	2,600	**0.4762**	**$33,333.33**
Somerset Co. RCC	75,665	85	4,420	**0.8095**	**$56,666.67**
Waldo Co. RCC	31,164	75	3,900	**0.7143**	**$50,000.00**
Washington Co. RCC	19,276	60	3,120	**0.5714**	**$40,000.00**
Westbrook PD	34,181	75	3,900	**0.7143**	**$50,000.00**
York PD	27,164	75	3,900	**0.7143**	**$50,000.00**
Totals:	**1,165,259**	**1,869**	**97,188**	**17.8000**	**$1,246,000.67**

*Source: Call volume statistics provided by Maine Public Safety Answering Points (PSAPs).
****EFD, EPD, & EMD Q FTE Costs @ $70K*** are calculated based total call volumes, NAED quality assurance Accreditation criteria, and Full-time Equivalent (FTE) positions costing $70,000 per year.

Note – High-lighted cells represent predicted or extrapolated information applicable to missing data.

Appendix I – Quality Assurance FTE Allocation Per PSAP For EFD & EPD Only

Appendix I - Quality Assurance FTE Allocation Per PSAP For EFD & EPD Only

PSAP	*Total Dispatched Calls/Year	Total Q EFD & EPD Only Cases/Year	EFD & EPD Only Q FTE Equivalent	**FTE Costs @ $70K
Androscoggin Co. SO	23,312	1,820	0.3333	$23,333.33
Bangor PD	41,103	2,600	0.4762	$33,333.33
Biddeford PD	10,971	1,820	0.3333	$23,333.33
Brunswick PD	41,059	2,600	0.4762	$33,333.33
CMRCC	67,547	2,444	0.4476	$31,333.33
Cumberland Co. 911	43,041	1,820	0.3333	$23,333.33
DPS Gray	41,906	1,612	0.2952	$20,666.67
DPS Houlton	18,223	1,768	0.3238	$22,666.67
DPS Orono	35,152	2,600	0.4762	$33,333.33
Franklin Co. SO	15,993	2,028	0.3714	$26,000.00
Hancock Co. RCC	8,904	1,820	0.3333	$23,333.33
Knox Co. RCC	46,254	2,600	0.4762	$33,333.33
Lewiston/Auburn 911	79,032	3,172	0.5810	$40,666.67
Lincoln Co. 911	37,692	2,600	0.4762	$33,333.33
Oxford Co. RCC	33,117	2,600	0.4762	$33,333.33
Penobscot Co. RCC	147,337	4,212	0.7714	$54,000.00
Piscataquis Co. SO	2,851	1,664	0.3048	$21,333.33
Portland PD	202,566	4,680	0.8571	$60,000.00
Sagadahoc Co. Comm	29,856	2,600	0.4762	$33,333.33
Sanford PD	21,062	1,768	0.3238	$22,666.67
Scarborough PD	30,831	1,300	0.2381	$16,666.67
Somerset Co. RCC	75,665	3,120	0.5714	$40,000.00
Waldo Co. RCC	31,164	2,600	0.4762	$33,333.33
Washington Co. RCC	19,276	1,820	0.3333	$23,333.33
Westbrook PD	34,181	2,600	0.4762	$33,333.33
York PD	27,164	2,600	0.4762	$33,333.33
Totals:	**1,165,259**	**61,048**	**11.1810**	**$782,666.67**

*__Total Dispatched Calls Per Year__ statistics provided by Maine Public Safety Answering Points (PSAPs).
**__FTE Costs @ $70K__ are calculated based EFD & EPD only case review volumes, and Full-time Equivalent (FTE) positions costing $70,000 per year.

Note – High-lighted cells represent predicted or extrapolated information applicable to missing data

Appendix J – Potential Implementation Costs

Appendix J – Potential Implementation Costs

Priority Dispatch

Priority Dispatch Corporation
139 E. South Temple, 5th Floor
Salt Lake City, Utah 84111
United States of America
800-363-9127 x. 132

Name State of Maine Attn: Eric Parry
Address
Phone Fax

Date 12/08/11
By Adam Hinckley
Title Director
Dept. Client Services

	Qty	Description	Unit Price	TOTAL
Dispatch Software	137	ProQA Fire Software Stations	3,100.00	424,700.00
	14	ProQA Fire Software Stations - training	900.00	12,600.00
	137	ProQA Police Software Stations	4,900.00	671,300.00
	14	ProQA Police Software Stations - training	900.00	12,600.00
	26	Client/Server Software - 26 PSAP's	2,500.00	65,000.00
AQUA	26	AQUA EFD Module	600.00	15,600.00
	26	AQUA EPD Module	1,000.00	26,000.00
Printed Protocols	137	EFD Manual Dispatch Card Sets - back up	395.00	54,115.00
	50	EFD Quality Assurance Guides	45.00	2,250.00
	1000	EFD Field Responder Guides	10.00	10,000.00
	137	EPD Manual Dispatch Card Sets - back up	495.00	67,815.00
	50	EPD Quality Assurance Guides	45.00	2,250.00
	1000	EPD Field Responder Guides	10.00	10,000.00
	5000	SEND Cards (Police)		
Training & Project Mgmt.	525	EPD/EFD Protocol Training and Certification (5 days)	590.00	309,750.00
	26	Technical Evaluation Days	1,500.00	39,000.00
	20	ProQA Software Training Days	1,500.00	30,000.00
	5	AQUA Software Training Days	1,500.00	7,500.00
	26	Software Support/Install Days	1,500.00	39,000.00
	150	Implemention Support/QIU Training Days/Consulting	1,500.00	225,000.00
	52	On-Site Go-Live Support	1,500.00	78,000.00
	94	On-Site Visits/Travel Expenses	1,500.00	141,000.00
Support & Annual Maintenance	1	Year 1 Extended Service Plan (ESP)** -Includes existing Statewide MPDS System Support		274,000.00
	1	Annual National Q Case Review Service for all 26 PSAPs - EFD and EPD (regularly $1,144,000) - Average $44,000 per PSAP per year		972,400.00
		- EMD, EFD and EPD (regularly $1,716,000) - Average $66,000 per PSAP per year		(1,458,600.00)
		Note: Bid is for the implementation and training of a combined PSPD system and may not be bid or quoted as separate items.		-
		* Assumes training site with 2/1 PC training stations		-
		** Total System Support includes technical telephone support, free updates and upgrades for all software and printed protocols, and 25 days of on-site QA or technical support or refresher training annually.		-
		All Amounts are in U.S. Dollars		
			Year 1 Total	$ 3,489,880.00
			Shipping	
			State Tax 0.00%	
			Local Tax 0.00%	
			Total	$ 3,489,880.00

Quote Year 1

Signature
Expires 180 Days Delivery Upon Request

Appendix K – Comprehensive Protocol Implementation Plan

Appendix K – Comprehensive Protocol Implementation Plan

PHASE DETAILS AND TASK DESCRIPTION

Purpose of the Comprehensive Implementation

The purpose of the implementation plan is to assist your dispatch center in meeting all the standards necessary for accreditation by the National Academies of Emergency Dispatch ("NAED") as an Accredited Center of Excellence ("ACE"). To accomplish this Priority Dispatch Corp ("PDC") will provide you with a self-sustaining quality assurance/quality improvement and risk management system that will ensure a continuous, safe and effective emergency dispatch operation both now and in the future. PDC Consultants will assist with the implementation of the standards that are included in this document. Our consultants will provide a report after each visit on the progress of the implementation to date, listing achievements set by the project plan and the accreditation standards, also noting the deliverables provided by PDC.

Initial Assessment

Prior to the initial visit, PDC Consultants will obtain information about the Communications center, key management officials, the current emergency dispatch methodology, emergency services provided, unit allocation, response times, management practices, quality assurance and risk management programs as they relate to the emergency dispatch function.

Other information obtained includes local issues of concern, demographic and statistical data. Most information is gathered through the use of survey instruments. These instruments will be completed and returned to PDC for review. PDC's assessment focus is directed towards training needs and quality assurance issues, the agency dispatch policies, practices and procedures, and a comprehensive systems approach to emergency services dispatch evaluation. PDC may elect to perform an on-site visit to help facilitate the gathering of information.

An on-site Technical Assessment must be completed well ahead of implementation. This must consist of a PDC Technical expert travelling to the client's facility and conducting an in-depth analysis of the client's IT infrastructure. This should include, but not be restricted to the:

- CAD Manufacturer and Operating System Version
- Number of workstations involved in the implementation
- Version of Windows and Base Memory considerations
- Existence of PDC Certified ProQA/CAD interfaces
- Network infrastructure and design

Once the assessment process is completed, a proposal is drafted to define specific solutions for implementing the Priority Dispatch System with the agency. The following pages describe each process of the implementation.

Phase 1 Implementation Pre-Plan:

A. Establish Oversight Committees Membership / Identify Agency Project Manager

PDC will directly assist your agency in establishing the membership of the Steering Committee and the Dispatch Review Committee ("DRC"). An agency project manager will be identified to work with PDC in establishing the phases of implementation, training dates, and site visits. The agency project manager will also have the responsibility of acting as a liaison between the Steering Committee and PDC for the duration of the implementation plan.

1. Steering Committee

The membership of the Steering Committee should include:

- Director of Emergency Operations
- Medical Advisory Physician
- Law Enforcement Authority (Chief of Police; Sheriff)
- Chief of the Fire Department
- Communications Supervisor
- Quality Improvement Unit Supervisor

This group's role is to make policy and procedures, approve or disapprove recommendations by the DRC. It will also have overall responsibility for managing the implementation plan, ensuring that all tasks are completed to its satisfaction within the allotted time frame. The Steering Committee should meet on a monthly basis initially and then quarterly, as need dictates. These monthly meetings should review the status of the implementation plan, protocol compliance data, and the status of achieving ACE certification.

2. Dispatch Review Committee (DRC)

This is a middle-management working group. The DRC is responsible for the formal process of reviewing Quality Improvement Unit-generated compliance. This includes review of individuals, shifts, and the entire center. The review will include the analysis of problematic and/or exemplary cases, implementation and follow-through of all report forms, tracking mechanisms, quality assurance processes, and operational feedback review. This group also makes formal recommendations for CDE program changes to the Dispatch Steering Committee.

The membership of the Dispatch Review Committee should include:

- Communications Supervisor
- Dispatch Supervisor
- Dispatcher
- Field Operations (Police, Fire and Medical personnel)

- Training Manager
- Members of the Quality Improvement Unit

The DRC's role is to act as the working group for the implementation, monitor the Quality Assurance/Quality Improvement ("QA/QI") process and its findings, and make recommendations based on these findings. The process should include the development or modification of policy and procedure for approval by the Steering Committee, and establishing the Continuing Dispatch Education program. The DRC will also be responsible for the day-to-day management of the completion of the various tasks identified in the project plan, and in some cases certain members may undertake the activities described in these tasks. The DRC should meet regularly or as needs dictate.

The DRC and Steering Committee may elect to hold joint meetings, but they should act as two separate bodies. *Both the DRC and Steering Committees should plan to have a joint meeting, in any case, during each of the Consultant's site visits, to facilitate any concerns or questions that might arise out of the initial implementation.*

Please have these individuals chosen and ready to meet during the Organizational Phase.

3. Quality Improvement Unit

Quality Improvement Unit (QIU)
When an agency has more than one person filling the ED-Q role, all of the ED-Qs collectively comprise the quality Improvement Unit.

Emergency Dispatch – Quality (ED-Q)
A certified, competent dispatcher/call taker who has taken on the quality assurance function of the communication center. This person has a responsibility to the emergency dispatchers, the Dispatch Supervisors, the Dispatch Review committee, and the Dispatch Steering Committee to provide timely, accurate, and appropriate information in order to "improve" the system based on verifiable data.

All members of the QIU need to be available during the Organizational Phase.

C. Agency to Identify Emergency Dispatch trainer candidates (optional)

Your instructor(s) should have some education of adult learning methods along with hands-on training experience, and in the case of Medical implementations, must be ALS (Paramedic) trained (ALS training is a requirement of ASTM standards for PDC instructors). *(See pages 13-17 of this document for a detailed description of requirements.)* PDC does not attempt to teach your staff how to teach in the general sense, but rather gives guidance on how to teach the PDC course specifically. The teaching skills of these paramedics will be pivotal in the success of your implementation, and so they must be selected wisely. They are *not*, however, required to be paramedic instructors. Your instructor(s) should become part of the QIU staff.

The in-house PDC instructor candidate(s) will be required to attend a minimum of five (5) courses: Course 1 to certify as a PDC, Courses 2-4 to audit and participate as an instructor's aide, and Course 5 to teach the course and be certified by a PDC Master Instructor, as provided by NAED requirements. It may take more courses as may be needed for the instructor candidate to complete their training. Should your organization not contract for the number of courses needed to certify all candidates, PDC will facilitate the candidate's attendance at a course (or courses) held by other agencies. PDC will not levy any charge for attending any course after the initial certification course, but your agency should expect to fund any traveling, accommodation, and subsistence expenses incurred by your staff. The instructor candidate(s) must meet the minimum standards set forth by the NAED (which meets and exceeds ASTM requirements). A copy of the NAED instructor prerequisites and certification requirements are provided within this proposal.

Your PDC instructor(s) will be restricted by contract to the provision of PDC training courses for the personnel of your agency only. There can be allowances for this provision under certain conditions in the contract. These contracts must be signed prior to the initiation of PDC training courses in your organization, and the contracts will specifically be between PDC and the individuals nominated by you. Instructors may provide in-house training, once certified, during this project. However, should the agency prematurely terminate the contract, for whatever reason, the in-house instructor will lose their certification.

D. ProQA-CAD Integration – ***This includes the installation and Configuration of each version of ProQA, Xlerator, and AQUA***

- **ProQA Installation and Configuration with the Agency Computer Aided Dispatch (CAD)**

    - A certified CAD interface for each of the ProQA software versions must be installed and tested well in advance of the "go live" date. Note that the client CAD supplier will most likely charge a fee for ProQA software integration. PDC must ensure that the appropriate integration and functionality of each ProQA CAD interface has commenced and that every effort has been made to resolve any outstanding integration issues. If there are shortcomings, these need to be identified to the client and an Acceptance of Shortcomings form completed by the client. PDC will make every effort to work with the supplier of your CAD system on the integration of the PDC software (ProQA™) with your CAD software. The system should not be brought on line until all issues have either been resolved or accepted by the client. It is important to note that the bulk of the integration work will have to be performed by the local CAD vendor, and delays in this regard must be resolved between the client the CAD vendor. PDC will make every effort to collaborate and work in a proactive manner to assist in the resolving of outstanding integration issues.

    - PDC Technical Personnel will assist the Agency's IT personnel in the installation and configuration of each version of ProQA (i.e. EMD, EPD, and EFD) and Xlerator Server. Local response configurations and CAD codes must be decided in advance of the go live date. This information must be input, configured and tested in CAD. QIU personnel will be trained in the export/import and reporting processes in ProQA.

- **Advanced Quality Assurance (AQUA™)**
  - AQUA will be installed and configured in the designated location. Since there is no CAD integration required for AQUA, installation is generally simple and straightforward. The client should have determined the number of AQUA installations required for QA purposes. Generally this is determined by the call volume, and the number of personnel assigned to the QIU. QIU personnel will be trained in the export/import and reporting processes.

Phase Two: Organization

This phase will begin once the contract for services has been executed, and the above pre-implementation processes are established.

A. Leadership Orientation (Day 1)

PDC shall conduct a Leadership Orientation for persons appointed to the PDC Steering Committee, DRC, QIU, and any other individuals designated by your agency. ***It is important that all of the senior management team attend this orientation, and demonstrate to the dispatch team the level of importance and their commitment to the implementation plan.*** This orientation is designed to be an introduction to the philosophy and objectives of the implementation plan. It is often helpful to invite representatives from organizations such as PSAP managers from adjoining agencies, neighboring medical, fire, and police dispatch management personnel.

B. Conduct First DRC and Steering Committee Meeting (Day 2)

The purpose of this meeting is to clarify roles and responsibilities during the implementation project, and to discuss the agreed schedule. The combined committee will also be asked to discuss, and, if necessary, amend policies regarding compliance to the use of the PDC and the QI process, prior to their adoption.

C. QIU Setup and QI Personnel Orientation (Day 3) / Training (Days 4-5)

PDC will provide the staff appointed to the QIU with comprehensive training in the performance of their duties. This will include provision of copies of potentially useful policies and all necessary forms, support in setting up necessary filing and tracking systems, and instruction on the use of the PDC QI database (AQUA) provided by PDC during this phase.

D. Field Responder Guide and SEND Card Training

PDC will provide training to your staff on how to train other affiliated agency trainers in the use of the Field Responder Guides and SEND cards.

E. Facilitate Bulletin Board communication processes and create a Reference Folder in Dispatch

The purpose of these tools is to ensure that all dispatch staff have access to up-to-date information on the PDC related policies, the implementation process, and their performance in the use of the system.

F. End of Phase One Deliverables:

- *Management Seminar*
- *AQUA case review software*
- *PDC Protocol Card Sets*
- *Pocket User Guides*
- *SEND Cards*
- *Implementation documents*
- *End of Phase Report*

Phase Three: Training and Implementation

A. Emergency Certification Dispatch Course(s)

Trained instructors will provide instruction for your dispatch staff in the use of the card set version of the Priority Dispatch system and other aspects of emergency dispatch and call taking during these courses. All staff with responsibility for any aspect of the dispatch function should attend one of these courses and will be expected to pass the final examination or a re-test. All members who are certifying as PDC's must also have current certification in CPR. Ideally, all members of the Steering Committee, DRC and QIU should also attend. Our experience has been that the attendance of carefully selected field personnel can assist in overcoming any concerns that field staff may have about the PDC, and may also help in breaking down the barrier that often exists between operations and dispatch. Recertification is required every two years.

B. IT/System Admin Training and ProQA Training

PDC IT/System Implementation Specialist will conduct a training session for IT personnel and the System Administrator. This is a 4 – 6 hour long session.

When the ProQA-CAD interface is completed, and the software is brought on-line, PDC will provide communication staff with ProQA software training. Computer work stations will be required for onsite software training. Should the integration and implementation of ProQA in the CAD system be delayed, a separate visit will be scheduled for training.

C. Field Orientation and Distribution of Field Responder Guides

During this phase all of the responder personnel will receive a tutorial on the purpose of the PDC and its anticipated impact on field operations. This is generally facilitated through the existing training organization, with the assistance of the PDC consultant. Responder staff will also be instructed in the use of a Field Feedback Form which allows them to request follow-up on cases where the actions of

dispatch staff were exemplary or where the information given did not match the situation found at the scene. These forms will be distributed at this time. All responder staff will also be provided with a Field Responder Guide which will offer further information and a means of translating the PDC codes transmitted by the dispatchers into the specific protocols used in dispatching the unit(s).

D. SEND Card Orientation and Training

PDC provides (with the exception of EFD) as an integral part of the implementation, credit-card type documents to be issued to co-responder personnel and to any local dispatch staff. These list a small number of questions, detailing the minimum data to be passed by responding personnel from these organizations to their dispatch center. Field Responders personnel should be provided with a brief tutorial when these cards are issued, detailing their purpose.

E. Failure of Certification Examinations

All dispatch staff are expected to certify as Emergency Dispatchers by the NAED prior to their use of any of the protocol systems. Subsequently, any PSAP employees who fail their first attempt at the certification examination will be offered the opportunity to re-test. They will be advised of areas of weakness identified from their first exam, and be given suggestions on the areas they may wish to study. When they feel ready, they will be invited to contact the National Academy of Emergency Medical Dispatch for an oral (telephone) re-test focused on their areas of weakness. Should they fail this they may, at your agency's discretion, participate in a second full PDC course and take the written test again.

F. Initiate use of the Priority Dispatch System / On-Line Training

Upon completion of certification training, your agency should start using the system to process 9-1-1 calls. Dispatch staff will be expected to use it to interrogate callers, assign codes, relay information to responders, and to give telephone instructions to callers. At this stage, however, your agency should not make any changes to its response configurations and modes. For the first four weeks the role of the members of the QIU will be to act as on-line trainers, providing as much support as possible to the dispatch staff using the system. Coverage by the QIU should be arranged to maximize the amount of time they spend in the dispatch center on all shifts. In particular twenty-four hour cover should be provided for the first two days of initiation of the system's use. PDC's consultant will participate in this, providing support during the initial go-live. Compliance to the protocols and scripts must be emphasized right from the beginning, with constant reinforcement.

G. ProQA Implementation

Once the ProQA integration has been tested and accepted by the client, and all staff has been trained in its use, ProQA may be immediately utilized for on-line call processing. At this point, the QIU should be trained to access the quality improvement and management information reports provided as an integral part of the system. ProQA data is used in conjunction with AQUA to enhance case review as an integral part of the QI process.

H. Case Review

At this point in the project, evaluation of randomly selected calls by the QIU will commence. PDC's consultant will provide oversight and feedback on this process. The members of the QIU will provide feedback on individual cases to the dispatch staff supervisors, who will then provide feedback to the individual. Remedial training activities may be necessary to prevent a recurrence of any identified problems. In order to meet accreditation standards, the QIU must review a statistically significant number of cases proportionate to the total number of 9-1-1 calls received at the center. This equates to reviewing:

- Agencies whose call volume is between 43,333 and 500,000 will be required to audit a percentage ranging between 3% and 1% (based on this sliding scale calculator)
- Agencies whose call volume is below 43,333 will be required to audit 1,300 cases (25 per week)
- Agencies whose call volume is below 1,300 will be required to audit 100% of their cases
- Agencies whose call volume is above 500,000 will be required to audit 1% of their cases
- The AQUA software will assist the reviewing team in providing compliance reports which can be measured against Accreditation requirements.

Public Education

PDC will assist in the development of a public education program. This is important to raise awareness of the benefits of the Priority Dispatch System providing presentations to special interest groups, as well as demonstrating the system to other entities. Dispatchers should be invited to participate in any presentations and demonstrations.

I. Press Releases

PDC can offer a suggested outline for news media and press use.

Deliverables:

- *Certification Courses as needed*
- *Protocol card sets*
- *Field Responder Guides*
- *Quality Assurance Guide*
- *SEND Cards*
- *Implementation documents*
- *ProQA and AQUA Reports*
- *Trainer Development Report and Instructor Trainer Kit*

- *Integrated CAD/ProQA software*
- *End of Phase Report*

Phase Four: Quality Assurance

A. Continuing Dispatch Education (CDE) Program

Provision of CDE classes should commence no later than one month after implementation of the Priority Dispatch System. In part fulfillment of the minimum re-certification requirement of twenty-four hours of CDE per two years, we would recommend that you provide all dispatch staff with one hour of classroom-based CDE per month. The PDC consultant will work with the QIU staff to develop topics for CDE. These topics should be linked to the findings of the quality improvement process. Details of the forms of CDE required for re-certification beyond didactic sessions will be provided.

B. Ongoing Case Review

The consultant will assist the QIU, and DRC in the interpretation of the results from data gathered during the QA/QI process. The DRC and Steering Committee should plan to meet jointly each time the consultant makes a visit to the site.

Deliverables:

- *End of Phase Report*

Phase Five: Quality Improvement

Ideally, this phase will be entered when overall compliance of your dispatch staff is ninety percent or greater. This should be achieved within three to six months of the go-live date.

A. Enhancing Response Configurations and Modes

Once the required levels of compliance have been achieved, your agency may wish to make adjustments to its response configurations and modes. PDC will assist in this process. Examples of changes you may wish to make also include:

- multi- agency response
- emergency vs. non-emergency response
- fine tuning resource allocation

B. Evaluate Response Configuration

Once changes to response configurations and modes have been implemented, the impact of these changes should be evaluated. Further adjustments can then be made as necessary and should be an ongoing process for the life of your agency.

Deliverables:

- *End of Phase Report*

Phase Six: Accreditation

A. Final System Assessment and Review

PDC Consultants will assist you in gathering and presenting the necessary evidence to make an application to the National Academies of Emergency Dispatch to become an Accredited Center of Excellence. The Consultant's final report will identify areas of your Operation that you may wish to give particular attention to after completion of the project.

B. Schedule Press Conference

Your accreditation plaque will be presented by a senior officer of the National Academies of Emergency Dispatch. As accreditation is a direct reflection of your organization's achievements and the high quality of service provided to the community which it serves, you may wish to schedule a press conference on this occasion.

Deliverables:

- *Final Report*

Program Maintenance Implementation

Upon completion of the initial comprehensive PDC implementation, the terms and conditions regarding PDC program maintenance specified in the Consulting Agreement and End User License Agreements shall take effect. Our standard contract (a copy of which will be provided should you decide to implement this project) requires that your organization should, for a period of six years following the completion of this project:

- Maintain accreditation as an NAED Accredited Center of Excellence by adhering to the documented standards and participating in three-yearly re-accreditation reviews;

- Maintain certification of in-house PDC Trainers, to include their attendance at two yearly update seminars;

- Maintain the currency of the PDC card sets and software by installing updates and purchasing upgrades as they become available.

During this period PDC undertakes to provide your organization with the following:

- Continuing support and provision of reasonable technical assistance for all aspects of the Protocol systems;

- Continuing review and comment upon your organization's suggested modifications to response configurations;

- Provision of the latest generally available improvements to the Protocols, in an effort to keep your Protocols current for standard-of-care reasons. Updates to the *current* edition of the cards and software will be provided free of charge. Upgrades to new editions of Protocols will be charged at a proportion of the original license cost. Software maintenance is provided for via a maintenance contract;

- Provision of your organization's currently authorized PDC Trainer(s) with timely updates to all Protocol and Protocol training materials, and assistance in having such Trainer(s) meet and keep current with the NAED's Trainer certification requirements;

- Assistance in maintaining NAED accreditation as an Accredited Center of Excellence.

NAED Twenty Points of Accreditation

Following are the standards which your agency must meet in order to be eligible for accreditation by the National Academies of Emergency Dispatch as an Accredited Center of Excellence (ACE). Full support will be afforded by PDC's consultant in achieving these standards.

1	*All police, fire and medical dispatch call-taking and dispatching work stations* – Indicate the total number of stations and how many are active (call-taking) versus supervisory or standby.
2	*Current Advanced PDC licensing of each dispatch position* – List all dispatch positions and/or ProQA license numbers.
3	*Current Academy certification of all dispatch personnel* – List all functioning telecommunicators to include first and last name, hire date, (re)certification date, next expiration date & certification number; also list instructor(s) used for initial DISPATCHER training during the application period.
4	*Maintenance of Academy certification* – Provide copies of all policies related to certification and training of existing and newly hired dispatchers; include policy on how newly hired dispatchers will be certified within three (3) months; include policy indicating that all dispatchers will be trained by current Academy-certified instructors; and include policy detailing routine provision of Continuing Dispatch Education (CDE) opportunities.
5	*Minutes from Dispatch Review Committee (DRC) and Steering Committee meetings* – Provide copies of agendas and minutes for at least six (6) months of DRC meetings and two (2) Steering Committee meetings within a nine (9) month period immediately prior to this application to include meeting type (DRC

	vs. Steering), attendance and date held; list the names and organizational titles or positions of the DRC members; list, separately the same for Steering Committee members.
6	*PDC quality assurance and improvement methodology* – Provide complete description of methods used to evaluation PDC performance in using all elements of the PDC correctly; include succinct details of how PDC compliance is checked, tabulated and shared with the dispatchers; list the beginning date on which both center and shift compliance scores were formally posted; list the beginning date on which individual compliance scores were privately shared with each dispatcher.
7	*PDC Quality Assurance and Improvement database* – Provide case review compliance summaries with monthly totals for the six (6) month period immediately prior to this application; include the incidence of each Chief Complaint Code among all calls; include the incidence of each Determinant level (**A**LPHA, BRAVO, **C**HARLIE, **D**ELTA, **E**CHO) among all calls; include protocol compliance levels showing all seven (7) scoring areas.
8	*The number and percentages of randomly reviewed cases* – Provide verification that the percentage of random cases reviewed, through a formal quality assurance audio case review process for the six (6) month period immediately prior to this application, equals or exceeds that required by the Academy-approved sliding-scale formula: "The greater of 25 cases per week or 3% of the total weekly EMD, EFD, or EPD call volume."; list the total number of calls processed during the six (6) month period immediately prior to this application. These include all 9-1-1 calls (or 999, 114, or other automatically routed emergency number calls) plus seven-digit number calls from the public; list the total number of calls randomly reviewed during this period; exclude calls from medical, physician, nursing or extended care facilities.
9	*Consistent, cumulative, PDC case review at or above the following percentages* – 95% - Case Entry protocol compliance 95% - Chief Complaint selection accuracy 90% - Key Question protocol compliance 90% - Post Dispatch Instruction protocol compliance 95% - Pre-Arrival Instruction protocol compliance 90% - Sub determinant code selection accuracy 90% - Cumulative overall score Include monthly totals of the seven (7) scoring areas above for the six (6) month period immediately prior to this application; submit a summary separately; list all scores by month and year with the most recent month last. All scores for months 1 and 2 must be higher than 70%; for months 3 and 4 must be higher than 80%; and for months 5 and 6 must be equal to or exceed listed Academy standards.
10	*Correct quality assurance and improvement scoring and practices through independent Academy review of randomly assigned cases* – Contact the

	Academy Executive Director or Board of Accreditation Chair for instructions on selecting and submitting 25 cases on tape (including case review forms and scores) from assigned times and dates designed by the Academy. The Academy's Board of Accreditation will carefully review these cases for both standard compliance to protocol and correctness of case review evaluation and scoring by your reviewers.
11	*Field personnel orientation to the proper use of the PDC with Pocket User Guides and through in-service or video orientation* – Provide a brief description of the PDC field personnel orientation process; include a copy of any orientation videotape or other audio-visuals used; list the total number of field personnel oriented; list the total number of Pocket User Guides distributed.
12	*Use of field responder Feedback Reports* – Provide a brief description of the procedure for processing and distributing feedback reports; include a copy of the implemented feedback report form; include a copy of the implementation policy or memorandum.
13	*Current Continuing Dispatcher Education (CDE) program functions* – Provide a brief description of locally-approved CDE activities which meet Academy recertification requirements; include CDE program schedules and topics for the six (6) month periods immediately prior and subsequent to this application (12 months total); include attendance records for the six (6) month period immediately prior to this application.
14	*Police and Law Enforcement receipt of S.E.N.D. (Medical Miranda) pocket protocols and related in-service or video orientation* – Provide a brief description of the S.E.N.D. implementation and orientation process; include a copy of any orientation videotape used; list the number of law enforcement personnel oriented; list the number of S.E.N.D. cards distributed.
15	*Correct location configuration of all PDC response assignments* -- Provide a brief description of the development, revisions and approval of current response assignments (including configuration and mode); include copies of all DRC and Steering Committee meeting minutes reflecting this revision and approval process; include formal written approvals by the medical director, the DRC and the Steering Committee.
16	*Field implementation of all PDC response assignments* – Provide a copy of the PDC protocols showing all local response assignments listed by sub determinant; include a copy of the implementation policy or memorandum.
17	*Monitoring and maintenance of PDC response assignments* – Provide a copy of the memorandum of agreement to formally review and re-approve all response assignments and mode each year through the DRC and Steering Committee structure.
18	*Medical Director oversight and controls* – Designate a licensed medical physician to provide medical oversight to the communications center and PDC processes; list the name, address, specialty, license number and state(s) or province(s) in which this person is licensed; include a copy of the memorandum

	of agreement allowing the medical director the full level of medical dispatch involvement as designated in the NAEMSP Position Paper.
19	*Sharing of non-confidential data with the Academy for review* – Provide a memorandum of agreement to share non-confidential, nameless data and anonymous questionnaires with the Academy for review to enhance the on-going improvement of the protocols and protocol systems in general.
20	*Support of the Academy's Code of Ethics and practice standards* – Completion by and signature on the Accreditation Application by an authorized representative.

Example of the Schedule for a Comprehensive Implementation Plan of the Priority Dispatch System (Including Consultant Site Visits)

Phase / Task	Description	Site Visits
Pre-Implementation		
	Complete recruitment of Personnel to QIU	
	Establish PDC oversight committee membership / identify project manager	
	Identify current response criteria (A, B, C, D, E)	
	Identify in-house instructors	
	Initiate Medical Control	
	Schedule implementation and PDC training	
	CPR train communications staff	
Phase One	**Organization**	**Month One**
	Management seminar	**Visit One (5 days)**
	Conduct first combined DRC and Steering Committee meeting	
	QIU setup	
	QI personnel / orientation and training	
	Start CAD integration (software development only)	
	Sign PDC Trainer contracts	
	Post PDC notice board and reference folder in dispatch center	
Deliverables		
	AQUA (case review software)	
	Implementation documents	
	End of Phase Report	
Phase Two	**Initiation**	
	3-day PDC courses as necessary	**Visit Two (N*3 days)**
	Four-hour ProQA Training courses (optional)	**(N'/2 days)**
	Field orientation and distribution of Pocket User Guides	
	SEND Card orientation and video	
	Initiate PDC Trainer development	
	Re-tests	
	Initiate use of PDC / on-line training	
	Initiate ProQA implementation (optional)	

	Initiate off-line case review Initiate public education Publish press releases	
Deliverables		
	Certified PDC Report *PDC Protocol Card Sets* *Pocket User Guides* *SEND Cards* *PDC Trainer Development Reports* *PDC Trainer Kit* *End of Phase Report*	
Phase Three	**Quality Assurance**	**Month Two Visit Three (2 days)**
	Initiate Continuing Dispatch Education	
	Review of QIU Conduct second Combined DRC/Steering Comm. Meeting	
Deliverables		
	End of Phase Report	
Phase Four	**Quality Improvement**	**Month 3 Visit Four (2 days)**
	Enhance response configurations and modes	
	Evaluate system impact	
Deliverables		
	End of Phase Report	
Phase Five	**Accreditation**	**Month 6 Visit Five (2 days)**
	Final system assessment and review/Preparation of Accreditation Documents Schedule accreditation press conference	
Deliverables		
	Final report	
	Total Site Visits ***Total Days***	***Five*** ***11+(N*3)+ (N'/2)***
	End Implementation / Enter Program Maintenance Phase	

Summary of Deliverables:

1. 5 QI logistic, training and evaluation visits (10 days);

2. 3-day PDC Certification Courses as needed for up to 24 students and PDC instructor development (i.e., Train-the-Trainer) (2-3 days on-line with dispatchers in Communication Center);

3. One Management Seminar / Executive Certification Course (1 day);

4. Manual Protocol Licensure for the appropriate number of dispatch work stations;

5. ProQA licensure for the appropriate number of dispatch work stations and 1 ProQA Licensure for 1 supervisory/QI workstation, plus ProQA training (optional);

6. 1 AQUA database;

7. 1 PDC Trainer Materials Package for your agency including:
   a. *Course slides*
   b. *Course transparencies*
   c. *Master audio/video training tape*
   d. *Anonymous hero video*
   e. *Manual protocol card sets (6)*

8. The appropriate number of Pocket User Guides for all field responders and QIU members;

9. The appropriate number of SEND Cards for law enforcement and/or fire personnel in your agency's response area.

Appendix L – Detailed Implementation Plan Options

Appendix L - Detailed Implementation Plan Options

Proposal for Implementation of the Police and Fire Priority Dispatch Systems (FPDS/PPDS™) Statement of Work

Prepared on: (Date)

TO:

FROM:
Priority Dispatch Corp
139 E. South Temple, Ste. 500
Salt Lake City, UT 84111
Federal Tax ID # 87-0447-442
Phone: (800) 363-9127
Fax: (801) 363-9144

Introduction
The purpose of the implementation plan is to assist your dispatch center in meeting all standards necessary for accreditation by the National Academies of Emergency Dispatch® (NAED) as an Accredited Center of Excellence (ACE).

To accomplish this Priority Dispatch Corp. (PDC) will implement a quality assurance/quality improvement and risk management plan to guarantee a continuous, safe, and effective emergency dispatch operation both now and into the future.

Option 1 – One-Time Approach to Implementation
This Statement of Work provides a detailed phased approach for a statewide FPDS and PPDS implementation that maximizes and supports the achievement of NAED accreditation for each of the 26 state funded PSAPs. It would be our recommendation that the PSAPs be broken into geographic regions containing three to five centers in each region. Each phase of the implementation would be performed in each region.

Option 2 – Multi-Year Plan Approach to Implementation
This Statement of Work provides a detailed phased approach for a statewide FPDS and PPDS implementation over a multi-year time frame that maximizes and supports the achievement of NAED accreditation for each of the 26 state funded PSAPs. A “certified” CAD interface to ProQA Paramount is essential for system success. For this reason, PDC recommends that PSAPs with CAD providers that have committed to develop and support a certified interface proceed with the FPDS and PPDS implementation in year one, followed by PSAPs with CAD providers that require more time to develop an interface in years two and three.

Option 3 – Voluntary PSAP Participation Approach to Implementation

This Statement of Work provides a detailed phased approach for individual PSAPs that volunteer for an FPDS and PPDS implementation that maximizes and supports the achievement of NAED accreditation. A "certified" CAD interface to ProQA Paramount is essential for system success. For this reason, PDC recommends that only PSAPs with CAD providers that have committed to develop and support a certified interface be funded by the ESCB.

Throughout the implementation, our consultants will provide a progress report after each phase, listing achievements set by the project plan and the accreditation standards, also noting the deliverables provided by PDC.

All dates shown are tentative and subject to agreement.

Phase I: Pre-Planning

1. Survey and assessment

PDC will conduct an onsite operational and technical assessment. PDC implementation consultants will gather information about the communications center's current emergency fire and police dispatch (EFD/EPD) structure, process, and practices, including emergency services provided, unit allocation, response times, management practices, quality assurance process, and risk management programs.

A PDC technical implementation specialist will conduct an onsite analysis of the client's existing hardware and software infrastructure, relevant to the implementation of the Fire and Police Priority Dispatch System™ (FPDS/PPDS®). This includes, but is not restricted to the:

- CAD manufacturer and operating system
- Number of workstations involved in the implementation
- Version of Windows and Base Memory
- Existence of PDC certified ProQA Paramount®/CAD interfaces
- Network infrastructure and design

Once the assessment process is complete, PDC will report its findings and make recommendations to the client for use of, and any needed modifications or upgrades to, the IT infrastructure in preparation for implementing the FPDS/PPDS.

2. CAD (Computer-Aided Dispatch) integration

PDC will verify with your CAD system provider the integration of the PDC software (ProQA Paramount) and CAD software. The integrated system must be ready, and working seamlessly prior to the day of MPDS system start-up (go-live) . Your CAD vendor will be expected to perform the bulk of the integration, and any delays must be resolved between the agency and vendor. PDC will support this effort, but cannot perform CAD specific changes. Your CAD supplier may charge a fee for the work involved.

3. Oversight committee membership/identify agency project manager

PDC will assist your agency in establishing the membership of the Steering Committee,

Dispatch Review Committee (DRC), and the Quality Improvement Unit (QIU). The agency project manager will work with PDC to complete scheduled tasks, training, and project work on time and within budget. The agency's project manager will serve as the liaison between the Steering Committee and PDC for the duration of the implementation plan.

Phase II: Organization & Oversight

1. **Leadership orientation/planning meeting**
   A PDC consultant will provide a presentation to senior management, supervisory staff, training staff, quality assurance personnel, and stakeholder groups to the goals and objectives of the implementation plan. You are encouraged to invite representatives such as PSAP managers from adjoining agencies and neighboring medical, fire, and police dispatch management personnel to attend.

2. **Combined Steering and Dispatch Review Committee (DRC) meeting**
   The meeting is held to clarify roles and responsibilities of the oversight committees and to agree on all details of the implementation schedule, including training dates. The combined committee made up of DRC, Steering Committee, and QIU members is in charge of adopting, and, if necessary, amending policies regarding compliance to the use of the FPDS/PPDS and the Quality Improvement (QI) process, prior to their adoption.

3. **Initial response plan configuration**
   A PDC implementation specialist will direct the development of the initial response plan (a crosswalk from the existing system), that will detail the responses assigned to each FPDS and PPDS determinant code for the system start-up. Note: this response plan will be adjusted in the Quality Improvement Phase (Phase VIII) after 90% FPDS and PPDS protocol compliance is achieved.

4. **Software testing installation and integration**
   A PDC implementation specialist will assist the agency's IT personnel with the following:
   - Installation of ProQA Paramount software on training machines and production workstations
   - Installation of AQUA™ software on training machines and QIU workstations
   - Installation of Xlerator Server (Data management tool for ProQA Paramount and AQUA)
   - Configuration of the ProQA Paramount software to interface with the agency's CAD system
   - Mapping of the ProQA Paramount data to corresponding CAD codes via the ProQA Response Configuration utility

Phase III: Training

1. **EFD/EPD certification**
   All the agency's 911 medical call takers will receive the NAED EFD/EPD certification courses, consisting of 5 consecutive days of training, eight hours per day. All call takers must complete and pass the NAED EFD and EPD certification course before using the FPDS and PPDS in an actual (live) 9-1-1 setting.

2. **ProQA training**
   All EFD/EPD certified call takers will be provided this training for using the software version of the FPDS/PPDS (4 hours).

3. **AQUA training**
   Members of the quality improvement unit will be trained on use of the AQUA case review and performance evaluation software (8 hours).

4. **System administration training**
   Our software implementation specialist will spend four to six hours of classroom time guiding system administrators, IT staff, and QIU members through administrative modules and teaching them how to update and implement agency specific policies, including response configuration and reporting modules.
   Should the integration and implementation of ProQA in the CAD system be delayed, a separate visit will be scheduled.

Phase IV: Field Responder Orientation and Education

1. **Field orientation and distribution of Field Responder Guides (prior to on-line system use)**
   - PDC consultants will provide a brief tutorial explaining the principles of the FPDS/PPDS and its impact on emergency operations.

   - **SEND™ protocol orientation and training**
     PDC will provide an orientation of the SEND protocol, and issue SEND protocol cards to police officers, firefighters, dispatchers, and other emergency services personnel for reporting emergency events.

2. **Public education**
   PDC consulting staff will assist in the development of a public education program that describes how PDS will enhance emergency response.

3. **Press packet and media events**
   PDC will provide a press packet for news media and press use. PDC consulting staff will be available for scheduled media events with advance notice, and on a limited basis.

Phase V: System (go-live) Start-Up

1. **Implement FPDS/PPDS policies**
   Agency will implement all necessary policies to affect transition to use of the FPDS/PPDS. PDC will provide sample policies to agency.

2. **On-line system use begins (go-live date)**

All certified EFDs and EPDs will begin on-line use of the FPDS/PPDS, including the ProQA software at pre-determined date and time.

3. **PDC on-site support**
   A PDC implementation specialist will be on-site to oversee system-start up of the FPDS/PPDS.

4. **Case review begins**
   QIU personnel will begin case review using AQUA software within 24 hours of (go-live) system start-up.

Phase VI: Performance Assessment

1. **National Q Quality Assurance Service**
   Priority Dispatch will provide timely, cost effective and comprehensive case review services for state PSAPs. These services will align fully with National Academy call processing and QA standards and support the achievement of Accredited Center of Excellence (ACE) by the agencies.

2. **Continuing Dispatch Education (CDE) program (30 days post start-up)**
   PDC consulting staff will review quality assurance data to help identify performance problems to use in the development of CDE topics; PDC consultants will provide examples and curriculum outlines.

3. **Remedial site visits (8-hour increments)**
   In the event that the center does not achieve 90% overall MPDS protocol compliance within 180 days (six months) of system start-up (go-live), a PDC consultant will conduct a Phase V visit to troubleshoot and develop an appropriate action plan. Within an agreed upon amount of time following this visit, a supplemental visit will be made to verify the 90% compliance, checking to make sure the center is on target for accreditation. There is no limit to the number of supplemental visits provided upon request. However, a charge is assessed for each visit.

Phase VII: Quality Improvement

This phase begins when overall compliance to the FPDS/PPDS is 90% or greater. This will be achieved no later than six months after go-live date.

1. **Implementation of new response plan**
   Once achieving required FPDS/PPDS protocol compliance level of 90%, PDC consulting staff will assist the agency in implementing PDC's recommended response plan. This will include orientation to ProQA response configuration tables, field responder orientation, supervisor and dispatcher orientation.

2. **System impact evaluation**
   Evaluation of the changes to response configurations may mean further adjustment and agencies should consider the assessment process ongoing. A PDC consultant will be available for system assessment and review for the life of the contract.

Phase VIII: Accreditation

1. **Final system assessment and review**
   A PDC consultant will assist in gathering documentation necessary to apply for NAED accreditation as a Center of Excellence. A PDC consultant will provide ongoing master case review of QIU reviewed cases. Your communications staff will be responsible for randomly selecting and submitting compliance data on at least three percent of total EMD calls handled by the 911 center.

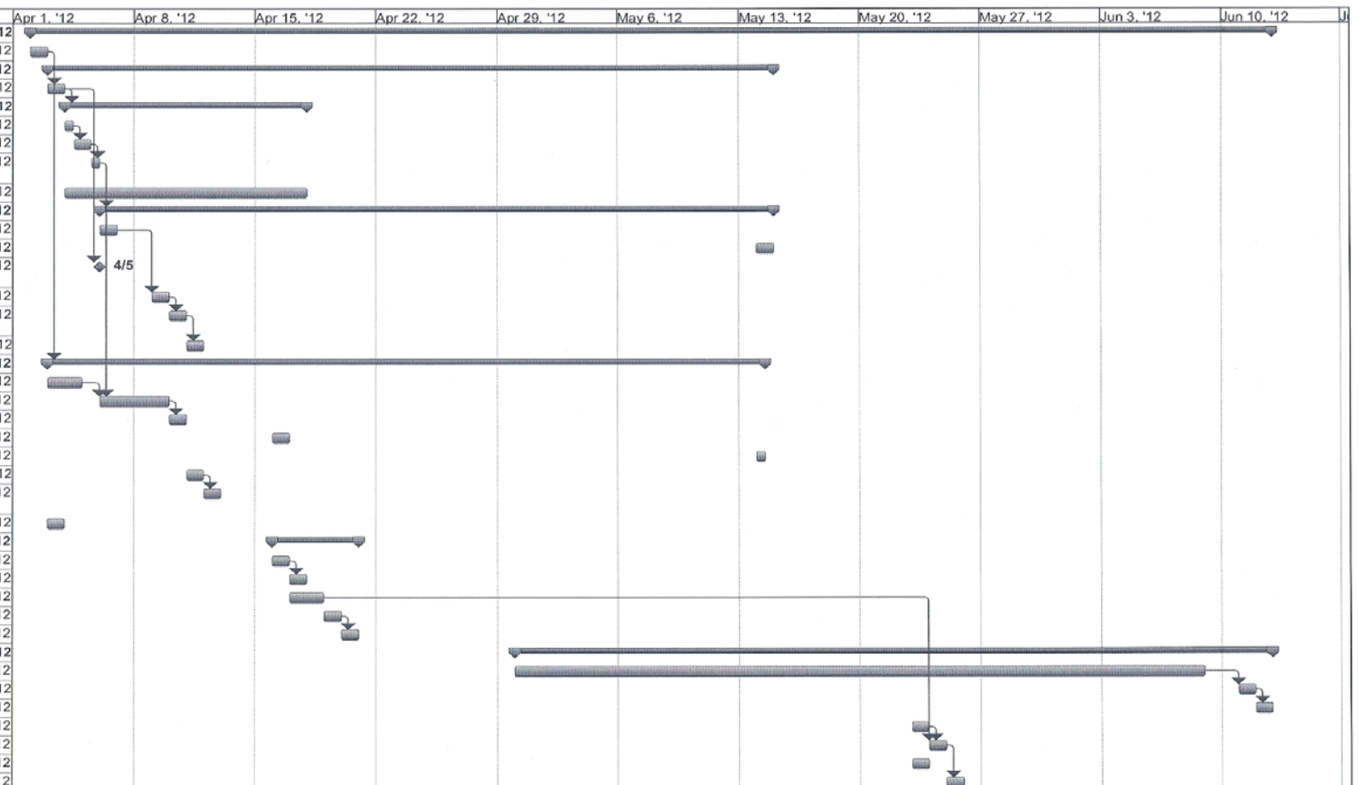
2. **Accreditation submission support**
   (*Includes accreditation site evaluation and all application fees*)
   PDC consultants will provide assistance in preparing and submitting the accreditation application and attending documentation.

3. **Press conference**
   A senior officer of the National Academies of Emergency Dispatch will present your accreditation plaque. As accreditation is a direct reflection of your organization's achievements and the high quality of service provided to the community it serves, you may wish to schedule a press conference on this occasion.

Appendix M – Example of PSAP Protocol Implementation Gantt Chart

Appendix M – Example of PSAP Protocol Implementation Gantt Chart

ID	WBS	Task Name	Duration	Start	Finish
1	1	**Protocol Implementation**	**52 days**	**Mon 4/2/12**	**Tue 6/12/12**
2	1.1	Contract Signing	1 day	Mon 4/2/12	Mon 4/2/12
3	1.2	**Initial Assessment**	**30 days**	**Tue 4/3/12**	**Mon 5/14/12**
4	1.2.1	Pre-Plan Conference Call	1 day	Tue 4/3/12	Tue 4/3/12
5	1.2.2	**Information Gathering**	**10 days**	**Wed 4/4/12**	**Tue 4/17/12**
6	1.2.2.1	Kickoff Meeting	0.5 days	Wed 4/4/12	Wed 4/4/12
7	1.2.2.2	Onsite IT Planning	1 day	Wed 4/4/12	Thu 4/5/12
8	1.2.2.3	Leadership Planning Meeting	0.5 days	Thu 4/5/12	Thu 4/5/12
9	1.2.2.4	EFD/EDP Training	10 days	Wed 4/4/12	Tue 4/17/12
10	1.2.3	**Committees & Technical**	**27 days**	**Thu 4/5/12**	**Mon 5/14/12**
11	1.2.3.1	1st Joint DRC Meeting	1 day	Fri 4/6/12	Fri 4/6/12
12	1.2.3.2	Follow-Up	1 day	Mon 5/14/12	Mon 5/14/12
13	1.2.3.3	Contact CAD Vendor - Provide ProQA Interface	0 days	Thu 4/5/12	Thu 4/5/12
14	1.2.3.4	Install CAD Interface	1 day	Mon 4/9/12	Mon 4/9/12
15	1.2.3.5	Install ProQA, Client Server	1 day	Tue 4/10/12	Tue 4/10/12
16	1.2.3.6	Test Interface, Settings	1 day	Wed 4/11/12	Wed 4/11/12
17	1.3	**EPD Q & Software Training**	**29.5 days**	**Tue 4/3/12**	**Mon 5/14/12**
18	1.3.1	EFD/EPD Q Training	2 days	Tue 4/3/12	Wed 4/4/12
19	1.3.2	ProQA Training	2 days	Fri 4/6/12	Mon 4/9/12
20	1.3.3	AQUA Training	1 day	Tue 4/10/12	Tue 4/10/12
21	1.3.4	IT Tech Sys Admin Training	1 day	Mon 4/16/12	Mon 4/16/12
22	1.3.5	Follow-Up	0.5 days	Mon 5/14/12	Mon 5/14/12
23	1.3.6	AQUA Install & Configure	1 day	Wed 4/11/12	Wed 4/11/12
24	1.3.7	CAD Interface/Dispatch Code Table	1 day	Thu 4/12/12	Thu 4/12/12
25	1.3.8	Follow-up	1 day	Tue 4/3/12	Tue 4/3/12
26	1.4	**System Start-Up & QA**	**5 days**	**Mon 4/16/12**	**Fri 4/20/12**
27	1.4.1	DRC/QIU Meeting	1 day	Mon 4/16/12	Mon 4/16/12
28	1.4.2	Implement Start-Up Policies	1 day	Tue 4/17/12	Tue 4/17/12
29	1.4.3	Field Responder Orientation	2 days	Tue 4/17/12	Wed 4/18/12
30	1.4.4	Joint Committee Meeting	1 day	Thu 4/19/12	Thu 4/19/12
31	1.4.5	Finalize for Go Live	1 day	Fri 4/20/12	Fri 4/20/12
32	1.5	**Online System Start Up**	**32 days**	**Mon 4/30/12**	**Tue 6/12/12**
33	1.5.1	Begin Case Evaluations	30 days	Mon 4/30/12	Fri 6/8/12
34	1.5.2	Follow Up - Data Review	1 day	Mon 6/11/12	Mon 6/11/12
35	1.5.3	Evaluate Implementation	1 day	Tue 6/12/12	Tue 6/12/12
36	1.5.4	Evaluate 1st Month Data	1 day	Wed 5/23/12	Wed 5/23/12
37	1.5.5	Develop Continuing Ed	1 day	Thu 5/24/12	Thu 5/24/12
38	1.5.6	DRC Evaluation Meeting	1 day	Wed 5/23/12	Wed 5/23/12
39	1.5.7	Review Response Plan	1 day	Fri 5/25/12	Fri 5/25/12



Project: MaineTimelineOp1.mpp
Date: Tue 1/3/12

Task, Split, Milestone, Summary, Project Summary, External Tasks, External Milestone, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, Progress, Deadline

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Appendix M – Example of PSAP Protocol Implemenation Gantt Chart