

Western Connecticut Council of Governments (WestCOG)

Feasibility Study for the Sharing/Consolidation of Selected Public Safety Facilities and/or Services

Phase 2 – Findings and Recommendations



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1.0 Introduction

WestCOG contracted Winbourne Consulting LLC to conduct a feasibility study for the sharing/consolidation of selected public safety facilities and/or services. Specifically, Winbourne was tasked with evaluating the potential for cost savings and service improvements.

The towns of New Canaan, Redding, Ridgefield, Weston, and Wilton have participated in this study. Specific areas of analysis have been identified in the chart on below.

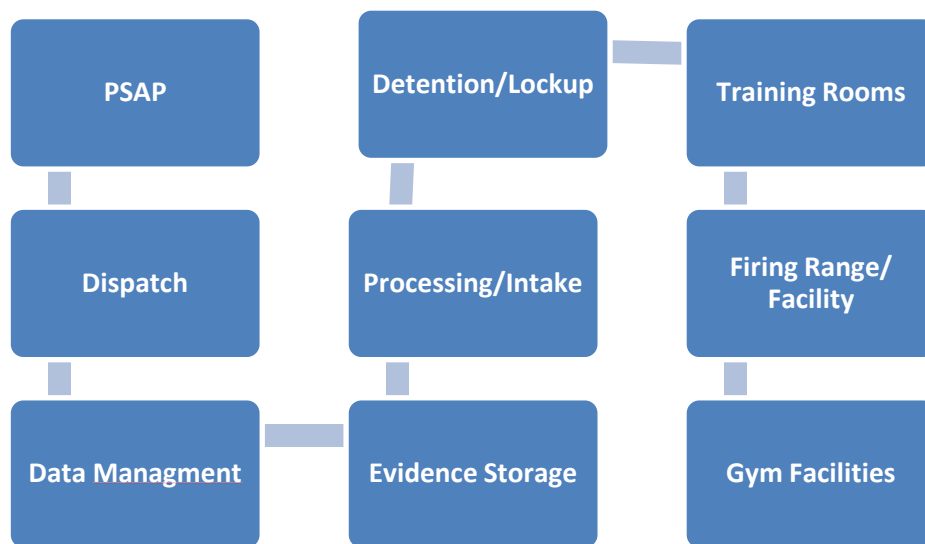


Figure 1: Areas of Analysis

Winbourne conducted a detailed analysis of the public safety services currently provided by each of the five towns, obtaining relevant data from the stakeholders via information request documents, surveys, workshops, email and follow-up communication. On Feb 17, 2020, Winbourne delivered the Phase 1 Report, Assessment of Current Environment which is the basis for the Findings, Options, and Recommendations presented in this current report.

2.0 Executive Summary for Findings and Recommendations

The five towns in the WestCOG Shared Public Safety Services Feasibility Study, New Canaan, Redding, Ridgefield, Weston, and Wilton, have all indicated a desire to provide the best possible public safety services to their citizens, balanced by the available resources. The following sections summarize our findings and recommendations on the feasibility of sharing the key services analyzed in this study. The full report details the Options that were considered in determining these recommendations.

OPPORTUNITIES

- Enhance Public Safety Operations and Safety of Personnel
- Improve Services Provided to Citizens
- Enhance 9-1-1/Emergency dispatch Center Capacity and Capabilities
- Reduce Costs to each town via economies of scale

PSAP/Dispatch

Finding #1.

Towns need executive empowerment to employ public safety industry standards and best practices.

All the towns indicated a desire to employ these standards, but with resource limitations in the current environment, meeting this objective is not possible. Commitment, support, and leadership from each town's executive office to enable compliance with standards, guidelines and best practices is necessary. Specifically, we note the following:

- *Towns Lack the ability to provide Public Safety Industry Performance Metrics. The PSAPs cannot provide data, or provided incomplete data, with regard to many key metrics tracking emergency service delivery.*
- *PSAP Staffing does not meet Industry Standards. This is especially notable with regard to the standard requiring multiple call takers on duty at all times. All the towns staff with only one telecommunicator at some point, and three of the five towns only staff with one telecommunicator at any time.*
- *PSAP Facilities do not meet current Industry Standards. The town PSAPs were designed prior to these standards and are therefore not constructed to public safety industry standards*

Option #1 – Maintain current PSAP locations but share technology

A decision to combine the PSAPs into a single PSAP and the execution of that decision will require a significant amount of time. To achieve an enhanced level of information sharing and situational awareness in a faster time frame, the towns could first transition to a single CAD/RMS system. This would allow the towns to maintain their current PSAP locations while also enhancing public safety operations.

Stakeholders	Benefits of Option #1	Concerns/Impact of Option #1
First Responders	Shared technology will provide option for greater situational awareness and Information sharing	Requires strict rules regarding information sharing and does not solve delays and other issues caused by a single call taker/dispatcher
Residents/Public	Solution will provide faster response times and closest-unit response capabilities	Requires strict rules regarding information sharing and does not solve delays and other issues caused by a single call taker/dispatcher
Town officials	Cost savings for sharing technology; Improved ability to measure PSAP/public safety performance and current PSAP locations remain open for resident access	Does not fully achieve adherence to public safety standards such as minimal staffing requirements and reduction in call transfers
Telecommunicators/Dispatch Personnel	No physical location change; Union membership is not impacted; Dispatching can be better coordinated for an incident on Jurisdictional borders;	Does not resolve lack of adequate staffing, PSAP capacity to manage a major incident and other identified issues

Table 1 Benefits and Concerns of Stakeholders

Option #2 – Combine PSAPs into regional communications center

To recognize economies of scale, PSAPs could unite into a regional center with all 9-1-1 answering and dispatch services operating in the same facility for the region using public safety industry standards. There are multiple options for a regional unified communications center:

- *Remodel a current building, and utilize the infrastructure*
- *Build a new facility from the ground up, or leverage an available building and infrastructure to construct a new PSAP facility*
- *Move into an existing regional center, such as the Southwest Regional Communications Center*

Stakeholders	Benefits	Concerns/Impact of Option #2
First Responders	Improved workflows, business processes, and public safety operations; Increased safety to citizens and public safety personnel as a result of enhanced staffing; unified utilization of radio systems	A solution would be required for police department 24/7 lobby services; perceived lack of control over public safety operations; and towns with their radio systems would still be responsible for maintaining those systems
Residents/Public	Improve 9-1-1/PSAP capacity and capabilities; improved staffing to manage 9-1-1 calls and incidents; eliminate/reduce 9-1-1 call transfers; improved response time for incidents	Perceived lack of access to “safe building” after-hours (e.g., police lobby service)
Town officials	Region-wide conformance to industry best practices; Cost savings for shared services via economies of scale, and State of Connecticut grants for combining three or more PSAPs; Note: Governance model is	Towns must all agree on location, design, governance, workflows and business processes of new PSAP; For the cost model to be most beneficial, all towns must participate (a minimum of three towns is required for grant funds)

	already established at SWRCC (representatives for Weston, Wilton, and New Canaan already sit on the SWRCC Governance Board);	
Telecommunicators/ Dispatch Personnel	Improved call taker/dispatcher environment; enhanced staffing reduces unnecessary workload; and utilization of current call taker/dispatcher personnel	Union contracts, where they exist, will need to be negotiated and migrated to the regional environment

Table 2 Benefits and Concerns with regional center

Recommendation #1a. Winbourne Consulting recommends that the Chief Elected Officials and public safety leaders in each town determine the priorities of each town, and the WestCOG region, with regard to the delivery of public safety services.

Specifically, an evaluation of each town (and the region's) desire to meet public safety industry standards is critical.

Recommendation #1b. Winbourne Consulting recommends that leadership in multiple towns in WestCOG develop a plan for participation in a single existing regional center, such as the Southwest Regional Communications Center (SWRCC). The numerous delays and inefficiencies identified in this analysis can be improved via a formal plan for a regional 9-1-1/PSAP center. This plan may consider a phased approach. For example, the towns of Weston and Redding could develop an implementation plan to migrate their 9-1-1 call answering and dispatch services to SWRCC and lead this effort for the other towns in WestCOG.

Finding #2.

All WestCOG PSAPs routinely utilize some form of call transfer to respond to 9-1-1 calls.

The table below summarizes the process used by each PSAP in the response to 9-1-1 calls:

PSAP	Police	Fire	EMD	EMD Pre-Arrival	% of 9-1-1 calls that are transferred
New Canaan PD	Dispatches	Transfers	Transfers	Transfers	33%
Redding PD	Dispatches	Dispatches	Dispatches	Transfers	19%
Ridgefield PD	Dispatches	Transfers	Transfers	Transfers	34%
Weston ECC	Dispatches	Dispatches	Dispatches	Transfers	17%
Wilton PD	Dispatches	Dispatches	Transfers	Transfer	25%

Table 3 PSAP Process in Response to 9-1-1

Transfers can occur because a 9-1-1 call needs to be redirected to the correct PSAP, or for the dispatch of fire or EMS resources. Each transfer adds time to the overall call processing and police, fire and EMS response times.

Recommendation #2. A Universal Call Taker model will improve response times.

The recommendations from Finding #1 apply to this Finding. In addition, the development of a Universal Call Taker model, with one agency providing the call taking and dispatch services for police, fire, and EMS will streamline operations.

KEY FINDINGS

- A STRATEGIC PLAN IS REQUIRED THAT IS APPROVED BY THE TOWN'S EXECUTIVE MANAGEMENT AND POLITICAL LEADERSHIP
- COMMITMENT TO ACHIEVING PUBLIC SAFETY STANDARDS AND REGION-WIDE OBJECTIVES IS A CRITICAL SUCCESS FACTOR
- A TOTAL COST OF OWNERSHIP BASED ON ALL DECISIONS MUST BE DEVELOPED TO ENSURE A COMPREHENSIVE UNDERSTANDING OF ALL INITIAL AND RECURRING COSTS

Finding #3.

Towns do not have desired levels of situational awareness of adjoining jurisdiction incidents and resources.

Although all the towns share jurisdictional boundaries with other towns, none of the five jurisdictions have the capability for real-time situational awareness for emergency and non-emergency incidents that occurred at the jurisdiction boundary.

Recommendation #3. *The towns should migrate toward a single solution for sharing real-time incident data.* Regional situational awareness can be obtained for the WestCOG towns in any of the following ways:

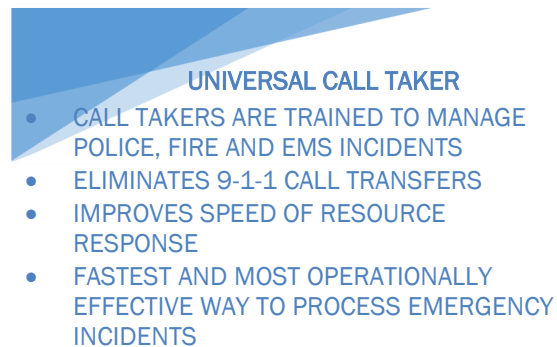
- Consolidation of the multiple PSAPs into a single PSAP or joining a regional center
- All the PSAPs operating from the same Computer Aided Dispatch (CAD)/Mobile system
- The implementation of a CAD-to-CAD interface to connect each PSAP with each other

The specific recommendation is dependent on the direction provided in Finding #1.

Finding #4.

The towns do not benefit from any economies of scale from sharing technology system acquisitions and ongoing maintenance costs.

The five jurisdictions utilize and maintain their own CAD/Mobile systems, with each town negotiating and contracting for these services individually.



Recommendation #4. *At a minimum, the five jurisdictions should consider purchasing and implementing the same CAD/Mobile system.* Benefits of this approach include:

- Reduced cost from economies of scale – Instead of each jurisdiction paying the Total Cost of Ownership (e.g., TCO - all initial and recurring costs), the TCO can be shared by the five jurisdictions
- The ability for all PSAPs to be on the same CAD/Mobile system will achieve real-time situational awareness and information sharing objectives
- Reduced Level of Effort – Instead of each department training their own system administrator, a shared resource can be leveraged

Finding #5.

The region lacks a unified public safety Geographical Information System (GIS) Master Plan.

GIS/Mapping is a mission critical system required for professional PSAP operations and aids in the rapid deployment of resources in an emergency. While GIS resources are available from the state, COG and some community systems, they are not integrated, standardized or regularly maintained for implementation into public safety systems.

Recommendation #5. *Implement a region-wide Public Safety GIS Master Plan initiative to develop a single map for all WestCOG jurisdictions.* In addition, it is recommended that the region develop a standard Concept of Operations for how GIS data will be employed.

KEY FINDINGS

- PRISONER INTAKE AND DETENTION REQUIRES A REGION-WIDE (IF NOT COUNTY-WIDE) MASTER PLAN BY PARTICIPATING JURISDICTIONS
- NO IMMEDIATE SIGNIFICANT BENEFIT WAS IDENTIFIED FOR PROPERTY & EVIDENCE
- A TRAINING AND FIREARMS RANGE INITIATIVE REQUIRES EXECUTIVE MANAGEMENT AND POLITICAL LEADERSHIP ENGAGEMENT AND SHOULD BE ASSIGNED TO THE FAIRFIELD COUNTY POLICE TRAINING OFFICER ASSOCIATION FOR VIABLE OPTIONS

Data Management

Finding #6a.

The region does not have a strategic plan regarding the procurement and implementation of Public Safety technology systems.

The five WestCOG towns each purchased a CAD/RMS system on their own from two companies, with no involvement from another jurisdiction, and currently operate these systems in a silo.

Finding #6b. *None of the five CAD/RMS systems are interfaced to another CAD/RMS system prohibiting the ability to benefit from real-time information sharing.*

Recommendation #6. *A single CAD/RMS solution for the region will provide significant financial and operational benefits and provide for real-time information sharing.*

Property & Evidence Storage

Finding #7.

It is imperative that personnel be able to impound property and evidence at each individual department's headquarters.

Recommendation #7. *No change to the current process is necessary.*

Intake/Processing, Detention, Lock-Up

Finding #8.

The low volume of in-custody arrests by the five law enforcement departments inhibits cost effective solutions such as building a single jail facility for utilization by all five towns.

Recommendation #8. *No change to the current process is necessary.*

Training Room

Finding #9.

A single law enforcement training center would be cost prohibitive for the five towns.

All five departments advised improved training logistics was an important topic that requires a master plan due to the complexity of the issue.

Recommendation #9. *Town CEOs should leverage the Fairfield County Police Training Officer Association (FCPTOA) for a larger region-wide training facility.* FCPTOA is a subsidiary of the Fairfield County Chief of Police Association and represents 35 different law enforcement agencies. The significant number of agencies provides exponentially more funding power than just five towns and the FCPTOA has the experience and expertise to assist in the development of training center requirements.

Firing Range

Finding #10.

Executive leadership is required to address this significant issue for WestCOG law enforcement agencies.

Firearms training and qualification sessions are required to maintain State of Connecticut certification and accreditation standards, reduce township liability, and ensure law enforcement personnel are both confident and proficient if deadly force is required. However, there is a limited number of ranges in Fairfield County and each existing range has its own constraints.

Recommendation #10. *Town executive leadership should provide direction to develop a master plan for law enforcement firearms training and qualification.*

- *Establish an FCPTOA committee to manage the project*
- *Identify all towns committed to becoming cost sharing stakeholders*
- *Identify all potential locations for a law enforcement range – both indoor and outdoor*
- *Identify all initial and recurring costs for all potential solutions*

Gym Facilities

Finding #11.

Gym facilities must be available to every department and easily accessible before and after tours of duty.

All departments advised removing gym facilities from police headquarters and fire stations would be detrimental to personnel maintaining fitness objectives.

Recommendation #11. *No change to the current process is necessary.* However, it is reasonable to consider discounts on memberships for Planet Fitness, Edge Fitness, or LA Fitness.

3.0 Public Safety Answering Point /Dispatch Environment

The following section identifies the Findings, Recommendations and Options, based on data obtained during the Assessment phase.

3.1 Towns Cannot Employ Public Safety Industry Standards, Guidelines, and Best Practices without Executive Empowerment

Finding

The towns' PSAPs and dispatch facilities do not have an executive mandate to employ public safety industry standards, guidelines, and best practices. All the towns have indicated a desire to employ these standards, but with funding limitations in the current environment, this is not possible. Commitment, support, and leadership from each Town's executive office to enable compliance with standards, guidelines, and best practices is necessary.

Each of the public safety departments have been in operation for many years and have maintained workflows and business processes developed up to and over 20 years ago. Additionally, each department has financial constraints and must complete the best job possible with the infrastructure, expertise, staffing and other factors they have available. We commend each department for their ability to adapt, overcome, and improvise as best possible in the current environment.

However, public safety and 9-1-1/PSAP operations have changed exponentially over the last 20 to 30 years. Standards, guidelines and best practices have been developed by numerous organizations such as:

- Association of Public Safety Communications Officials (APCO)
- National Emergency Number Association (NENA)
- National Fire Protection Association (NFPA)
- International Association of Chiefs of Police (IACP)
- International Association of Fire Chiefs (IAFC)

These standards, guidelines and best practices have been accepted by public safety departments and 9-1-1/PSAP centers nationwide. New Canaan, Wilton, Weston, Ridgefield, and Redding do not employ important 9-1-1/PSAP industry standards, guidelines and best practices. This deficiency has a direct negative impact on each 9-1-1/PSAP's ability to achieve maximum operational effectiveness and time efficiency. Refer to the 9-1-1/PSAP Standards, Guidelines and Best Practices section, Appendix A to this document, for detailed information.

To be clear, responding to a life-critical incident such as a medical emergency, traffic crash, fire, or violent crime in-progress requires a 100% streamlined and effective process from start to finish. The statement “seconds count” is absolutely true and applicable for public safety operations.

Compounding the issue is, the departments utilize their 9-1-1/PSAP personnel for multiple tasks at the same time including:

- *Call taker/dispatcher*
- *Inbound non-emergency and administration calls*
- *Outbound calls to PSAP*
- *Outbound administrative calls*
- *Front desk/lobby services*
- *Prisoner watch*
- *Other tasks*

Life-critical 9-1-1/PSAP operations require focused attention to meet public safety objectives (e.g., question and answer with the 9-1-1 caller(s); focused listening; accurate categorization of the incident in the CAD system; etc.). It is not possible for a single person to provide dedicated attention to a 9-1-1 caller, update the CAD system, communicate with public safety personnel in the field via radio transmissions and contact other resources at the same time under time duress in a stressful situation.

Many of the departments within WestCOG assign just one person to manage all 9-1-1/PSAP activities per shift. As previously mentioned, we understand the constraints each department has in the current environment however, the citizens expect that their 9-1-1 call will be handled in a manner that meets 9-1-1/PSAP standards, guidelines and best practices.

Guidelines, standards and best practices have been developed for every aspect of PSAP operations. Attachment A to this report identifies these standards.

Lack of Public Safety Industry Performance Metrics

The five PSAPs have all been in operation for many years. Some of the PSAPs have used the same exact workflows and business process for the past 20+ years. None of the PSAPs fully employ public safety industry performance standards, guidelines and best practices. For example, the PSAPs cannot provide data or have provided incomplete data with regard to the following metrics tracking service delivery:

Performance Metrics

- *9-1-1 Average Speed of Answer during busy hour periods (must be above 90% within 10 seconds)*
- *Call processing time – Answer time plus incident entry*
- *Dispatch time – Answer time to dispatch calculations*
- *Total response time – 9-1-1 call to time responding units arrive on scene*
- *Abandoned call processing – each abandoned call must be called back, or unit dispatched*
- *Outlier calls – 9-1-1 calls that may have been in the queue for 60 seconds or longer prior to the caller disconnecting*
- *Note: The fire/EMS departments that are secondary PSAPs do not utilize the Primary PSAPs call answer and processing time in their performance calculations*

Workflows

- *Call taker/dispatcher model*
- *Pre-alert for life-critical incidents*

PSAP Workload Metrics

- *Non-emergency inbound administrative telephone workload*
- *Outbound telephone calls (e.g., notifications, follow-up for field personnel, contact another PSAP/department, etc.)*
- *Inbound and outbound radio traffic*
- *Information request workload (e.g., driver license query, wanted person, enter stolen item, etc.)*

Non-PSAP Workload Metrics

- *Lobby/Counter activity*
- *Jail cell tasks*
- *Tasks for other city departments (e.g., after hours, holidays and weekends)*
- *Administrative tasks*

PSAP Staffing Does Not Meet Industry Standards

Importantly, the PSAPs do not meet the following specific standards with regard to Staffing:

Standard	Reference	Non-compliance
90% of all 9-1-1 calls arriving at the PSAP shall be answered within ten seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary)	NENA 56-005 – NENA Call Answering Standard/Model Recommendation <u>Standard for answering 9-1-1 Calls (Appendix A)</u>	Although the PSAPs have call answering times generally near, or within, the 90% threshold, the measurement of this metric does not look at the “busiest hour” but instead averages all the calls over a one month period of time. Some PSAPs fall below the 90% threshold even as an average.
When more than 2 telecommunicators are on duty, there must also be a supervisor on every shift	NFPA 7.3.4 “supervision shall be provided when more than two telecommunicators are on duty” NFPA 7.3.4.1 “supervision shall be provided by personnel located within the communications center who are familiar with the operations and procedures of the communications center”.	2 of the 5 PSAPs do staff more than 1 telecommunicator per shift, for some shifts, and should therefore also provide a Supervisor on duty for these shifts

Multiple call takers must be on duty	NFPA 7.3.1 “there shall be a minimum of two telecommunicators on duty and present in the communications center at all times”	Minimum staffing for all 5 WestCOG PSAPs is 1 telecommunicator. 3 of the 5 PSAPs only staff with 1 telecommunicator on duty at any time; the other 2 PSAPs have minimal staffing of 1 telecommunicator on specific shifts
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Table 4 PSAP Staffing does not meet specific standards

None of the jurisdictions utilized comprehensive workload information and/or a staffing tool (e.g. NENA) to develop a minimum mandatory staffing number.

Data that would show the duration of a 9-1-1 call (e.g., from first ring to call transfer to another PSAP or dispatch of first responder) is not available due to the lack of integration between the 9-1-1 call handling system and the CAD system. This data is critical in the overall analysis of the call processing time and to evaluate the staffing needs of each PSAP.

As previously stated, it impossible for a single person to complete all call taker and dispatcher tasks at the same time without incurring delays, human errors and inefficient operations.

Cost information for the current environment for each town is listed below and provided as a base for the options further in this section.

Current total cost of PSAP	Staffing (including overtime)
New Canaan	\$385,265
Redding	\$312,190
Ridgefield	\$410,888
Weston	\$403,510
Wilton	\$416,361

Table 5 Cost for Current Environment

PSAP Facilities Do Not Meet Public Safety Standards, Guidelines, and Best Practices

No PSAP was designed and constructed based on public safety industry standards, guidelines and best practices. A sample of the standards for PSAPs are listed below:

- *NENA (INF-039.2-2018 (originally 56-506) - Site Selection Criteria*
- *NENA (53-503) - PSAP Survivability Information Document*
- *NENA - PSAP Criteria Descriptions*
- *NENA (53-001) - Communications Center/PSAP Disaster and Contingency Plans Model Recommendation*
- *NENA (ANS 1.102.2-2010) - PSAP Service Capability Criteria Rating Scale*
- *NENA (53-501) - Hazard and Vulnerability Analysis*
- *NENA (NENA 04-022) - PSAP Master Clock Standards*
- *NENA (REF-001-2003) - Staffing Guidelines Report*
- *NENA (04-503) - Network/System Access Security*
- *NENA (04-502) - E9-1-1 CPE Site Characteristics*
- *NENA (77-501) - NG9-1-1 Transition Plan Consideration*
- *NENA (INF-006.1-2014) - NG9-1-1 Planning Guidelines*
- *NFPA 1221 - Standard on Installation, Maintenance, and Use of Emergency Services Communications Systems*
- *NFPA 110 - Emergency Generator Testing Requirements*
- *NFPA 70 - National Electrical Code*
- *ASIS International - Facilities Physical Security Measures (GDL FPSM-2009)*
- *ASIS International - General Security Risk Assessment Guideline*
- *UFC DOD Minimum Antiterrorism Standards for Building*
- *UFC Emergency Operation Center Planning and Design*

The various PSAPs provide a wide-range of risks for each jurisdiction, such as:

- *Mission critical system may stop operating for technical reasons due to infrastructure and equipment that cannot maintain 99.999% uptime, redundancy and a failover process*
- *Mission critical system is prone to risks from electrical problems, fire/smoke and other hazards*
- *Mission critical system does not meet cybersecurity standards and protocols*
- *Mission critical system is at risk due to human error from non-qualified personnel being in proximity of the equipment*
- *Mission critical system is at risk for internal or external sabotage*

As demonstrated above, there is a plethora of established public safety standards for a PSAP facility. The towns should use the identified documents to assist in the decision making process to combine into a single PSAP location.

Facility Requirements and Recommendations

- *Identify key facility requirements including size, redundancy and adherence to industry standards and best practices for mission-critical facilities*
- *Recommend current and future size and space requirements for operations, technology, support areas*
- *Determine redundancy and reliability factors*
- *Provide cost estimates based on projected space needs for one or two regional centers*
- *Determine interim and permanent options if applicable*
- *Identify potential local hazards or considerations for physical location in the region*

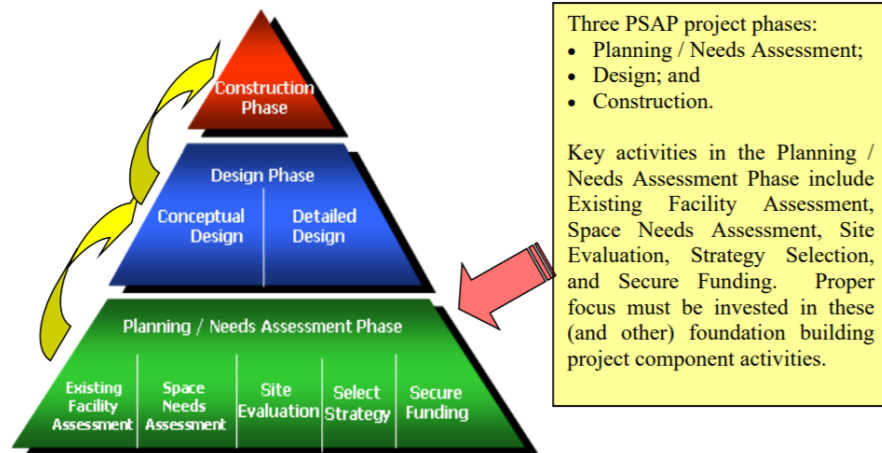
Facility Planning

The planning, design and construction of a PSAP facility is a multi-year project. Once a decision has been made regarding 9-1-1/PSAP operations, the towns should develop a multi-phase plan that starts with an interim solution thereby providing operational benefits prior to a final PSAP facility becoming operational. The “crawl, walk, run” model will provide the towns an appropriate time to plan for a permanent solution while also providing operational enhancements as the initiative progresses forward.

The towns should not underestimate the level of effort, complexity and cost for a permanent PSAP facility. Due diligence is required in every phase of the project.

The graphic below illustrates three major phases of a traditional PSAP project in a pyramid structure: Planning/Needs Assessment, Design, and Construction. Of the three, planning is viewed as the most important. Note: Though it could be argued that the Design Phase is a component of the Planning Phase, it is displayed separately in the graphic for illustration purposes and to emphasize its importance to a successful PSAP construction/renovation project. Planning (1) feeds Design (2) which drives Construction (3).

Properly planning a new or renovated facility is essential to ensuring that the benefits and disadvantages of the existing facility are fully and completely identified and documented. In addition, various options should



be properly evaluated, current and future needs determined, and resources committed to support the project (e.g., political support, funds, people, property, etc.). Note: Copied in part from Site Selection Criteria {NENA-INF-039.2-2018 (originally 56-506)}.

Options

A PSAP provides life-critical services and requires a higher standard of care when compared to other types of operations. A PSAP must be able to operate 24/7/365 under a wide range of factors including severe weather and power outages. As with other areas identified in this report, it would be cost prohibitive for each jurisdiction to build a PSAP based on public safety industry standards. More important, there is no business case for each jurisdiction to do so when a combined PSAP can provide a higher level of service at a reduced cost than five different PSAPs.

Across the country, smaller PSAPs are regionalizing to meet the demands of providing the best public safety services to citizens and first responders. The numerous delays and inefficiencies identified in this analysis can be improved via the implementation of a formal plan for a regional 9-1-1/PSAP center. This study is not an implementation plan, but rather a feasibility study to identify the best option for sharing services. As such, Winbourne is recommending that a regionalized 9-1-1/PSAP center for the five WestCOG jurisdictions be considered to significantly improve public safety and 9-1-1/PSAP operations.

Many towns are evaluating renovations to their existing police headquarters or emergency communications centers. However, simply having a newer facility will not alleviate the staffing issues for each town related to the changing 9-1-1 environment. To meet the public safety

industry standards for staffing and call metrics, it is necessary to look at economies of scale in combining the 9-1-1 services for these towns. One such option is to build a separate Regional Unified Emergency Communications Center for the use of the five towns in this study, and room to add any additional towns who would benefit from a shared services environment.

Option #1 – Maintain current PSAP locations but share technology systems

It is recognized that many of the PSAPs in WestCOG are intricately intertwined with the Police Departments and provide a comfort to members of the community who may need an “open door” late at night. In addition, the telecommunicators are experienced in answering and dispatching in their region.

However, as mentioned in this report, the current PSAP environments do not comply with public safety industry standards for 9-1-1 staffing, and ability to quantify call processing times. In addition, as described in Finding #2 below, calls are transferred for many emergency services, which delays response time and is not in conformance to industry best practices.

Technology, such as a shared CAD/mobile and GIS/mapping systems, could provide a first step in the WestCOG towns working together. Today, the two CAD/RMS systems used by the five towns are all procured separately, and do not work together to provide a regional picture of the WestCOG region.

It is understood that each type of stakeholder will have their own perspective for each option. It is important to understand benefits and concerns for all options. For example:

Stakeholders	Benefits of Option #1	Concerns/Impact of Option #1
First Responders	Shared technology will provide option for greater situational awareness and Information sharing	Requires strict rules regarding information sharing and does not solve delays and other issues caused by a single call taker/dispatcher
Residents/Public	Solution will provide faster response times and closest-unit response capabilities	Requires strict rules regarding information sharing and does not solve delays and other issues caused by a single call taker/dispatcher

Town officials	Cost savings for sharing technology; Improved ability to measure PSAP/public safety performance and current PSAP locations remain open for resident access	Does not fully achieve adherence to public safety standards such as minimal staffing requirements and reduction in call transfers
Telecommunicators/ Dispatch Personnel	No physical location change; Union membership is not impacted; Dispatching can be better coordinated for an incident on Jurisdictional borders;	Does not resolve lack of adequate staffing, PSAP capacity to manage a major incident and other identified issues

Table 6 Benefits and Concerns of Stakeholders

Option #2 – Combine into a regional (or existing regional) Emergency Communications Center

To recognize economies of scale, PSAPs could unite into a regional center with all 9-1-1 answering and dispatch services operating in the same facility for the region using public safety industry standards. There are multiple options for a regional unified communications center:

- Remodel a current building, and utilize the infrastructure*
- Build a new facility from the ground up, or leverage an available building and infrastructure to construct a new PSAP facility*
- Move into an existing regional center, such as the Southwest Regional Communications Center*

2a. Remodel an existing building to create WestCOG Regional Unified Emergency Communications Center

Many of the towns are currently evaluating a renovation or new-build of their police department headquarters, to include the 9-1-1 call answering and dispatch facilities. However, at this point in time, none of the current or planned police departments or emergency communications centers are ideal to serve as a regional communications center for all five jurisdictions.

However, a separate building may be identified to serve as the regional emergency communications center. The cost for a remodel could range from \$1.5M - \$4M depending on

the extent of renovations needed to meet the public safety standards identified. If three or more PSAPs consolidate, the State of Connecticut will provide a one-time incentive of \$300K for each PSAP to cover the costs of relocating and, the State of Connecticut will also assist with ongoing expenses based on the following approximate formula:

- *Population volume* @ \$1.87
- *Call Volume* @ \$14.83

This formula was used to calculate the potential recurring grants from the state in the table below.

Staffing for a regional center is based on the combined call volume of all five centers of approximately 25,000 calls per year. Staffing ranges from a minimum of two call taker/dispatcher positions plus a supervisor during the least busy shifts, to three call taker/dispatcher positions plus a supervisor) during peak workload periods.

PSAP	Call Volume 2019	% Total Call Volume	Cost Allocation 2 Positions w/Supervisor	Cost Allocation 2.75 Positions w/Supervisor
New Canaan	6,332	27%	\$319,607	\$389,807.10
Redding	2,773	12%	\$142,047	\$173,247.60
Ridgefield	5,539	23%	\$272,257	\$332,057.90
Weston	3,055	13%	\$153,884	\$187,684.90
Wilton	5,904	25%	\$295,932	\$360,932.50
Total Cost Allocation			\$1,183,730	\$1,443,730

Table 7 Staffing Costs

A Regional Unified Communications Center would answer all 9-1-1 calls, 10-digit emergency and non-emergency calls, provide EMD services, and dispatch for police, fire, and EMS.

PSAP	One Time Fees – New Facility CIP (estimated \$3M/5 towns)	One Time grant from state for 3 or more municipalities	Recurring costs, Personnel/ Staffing (2.75 positions)	Recurring costs for Maintenance, training, technology – Dependent on systems employed	Recurring grants from State estimate, if 3 or more municipalities join
New Canaan	\$600,000	(\$300,000)	\$389,807	\$25,000	(\$131,702)
Redding	\$600,000	(\$300,000)	\$173,247	\$25,000	(\$ 57,594)
Ridgefield	\$600,000	(\$300,000)	\$332,059	\$25,000	(\$128,908)
Weston	\$600,000	(\$300,000)	\$187,685	\$25,000	(\$ 64,467)
Wilton	\$600,000	(\$300,000)	\$360,932	\$25,000	(\$121,958)

Table 8 Ball Park Cost of remodeled Regional Center

2b. Alternately, the WestCOG towns could build a specific Regional Unified Communications Center for the five towns and any others wanting to join.

The cost model for this regional center is very similar to the option above, but the cost of the facility would also need to include the acquisition of the land for this new-build. These costs do not include this variable and should be added to the total costs below. Since this is such a wide variable, it was not reasonable to include this in the estimate below:

PSAP	One Time Fees – New Facility CIP (estimated \$5M/5 towns)	One Time grant from State for 3 or more municipalities	Recurring costs, Personnel/ Staffing (2.5 personnel)	Recurring costs for Maintenance, training, technology (Dependent on systems employed)	Recurring grants from State, estimate, if 3 or more municipalities join
New Canaan	\$1,000,000	(\$300,000)	\$389,807	\$25,000	(\$131,702)
Redding	\$1,000,000	(\$300,000)	\$173,247	\$25,000	(\$ 57,594)
Ridgefield	\$1,000,000	(\$300,000)	\$332,059	\$25,000	(\$128,908)
Weston	\$1,000,000	(\$300,000)	\$187,685	\$25,000	(\$ 64,467)
Wilton	\$1,000,000	(\$300,000)	\$360,932	\$25,000	(\$121,958)

Table 9 Cost Model

2c. WestCOG towns join the Southwest Regional Communications Center in Shelton, or another regional Emergency Communications Center

The five towns in the WestCOG study have a combined maximum annual 9-1-1 call volume of 25,000 calls, which is still a relatively small volume for a fully staffed center. The towns will increase public safety services, and realize economic efficiencies, by combining their call answering and dispatch services with an existing regional center, such as that proposed in Fairfield County, or the Southwest Regional Communication Center (SWRCC).

SWRCC, located at 100 Beard Sawmill Road in Shelton, Connecticut, has provided emergency communication services for first responders in Southwestern Connecticut for nearly 40 years. Currently, SWRCC provides several services to the region¹:

- CMED - The communication link between emergency medical personnel in the field and hospital emergency department physicians to provide pre-hospital care
- Fire and EMS dispatching services taking E911 calls and dispatching the appropriate resources
- Arranging and coordinating paramedic intercept requests, hospital diversion notifications, and is the region's primary dispatch resource for mutual aid requests

¹ Extracted from proposal from SWRCC to provide service to WestCOG towns, March 13, 2020

As explained by SWRCC in their March 13, 2020 proposal to Winbourne Consulting for potential services for the WestCOG towns:

“The Executive Director reports to a Board of Directors, the Governance Body of the organization. The Governance Body is comprised of appointed representatives by the chief elected official of each municipality in the region. Their responsibilities are to oversee and approve the budget, policy matters, current and future needs and to provide a level of accountability to the municipalities they represent. The appointed SWRCC representatives vote on all operational issues on behalf the chief elected official and services in their respective communities.”

Furthermore, the proposal outlines the qualifications of the staffing at the SWRCC:

“All dispatchers employed by SWRCC are State of Connecticut Telecommunicator certified and International Academy of Emergency Medical Dispatch (IAEMD) certified. The staff is comprised of an Executive Director, Operations Director, 13 full-time Dispatchers of which 3 are Floor (shift) Leaders and 5 are Certified Training Officers (CTO), 2 Call Takers, and 9 part-time/per diem employees.

SWRCC can provide quality dispatch services to the communities contained in the study being conducted by Winbourne. Our dispatch center has the capacity to deliver enhanced services by providing a staffing level with the ability to multitask and dispatch multiple resources at any given time. Having cross trained team that can deliver prearrival instructions while the other team members in the room dispatches the necessary resources will decrease the time delay in getting help to the caller.”

For the towns currently using Accucom, such as Weston and Redding, the SWRCC’s CAD system, DMS, is already integrated, and they would not need to change their CAD or RMS system. For others using NexGen, that integration does not exist and a more extensive evaluation of the impact of the CAD/RMS needs would be necessary.

SWRCC is part of the state’s radio core, maintained by the state. For the towns using the state’s radio network already, or in the process of migrating to this network, they will be able to directly utilize this network from the SWRCC. For a town that is not on the state’s radio core, the town’s radio communication can be transmitted over the state’s Public Safety Data Network (PSDN) without any difference in dispatch for the town. Each town would still be responsible for their own radio network if this is different from the state’s core.

Potential Cost Model for All Five Towns Joining SWRCC

SWRCC provided the following table of potential costs for the five towns to join their facility for 9-1-1 call answering and dispatch services. However, they caution there are many variables that make providing a solid cost figure difficult. These variables include the uncertainty of how many of the municipalities will sign on and the specific call volume data for each municipality. In addition, SWRCC is currently in discussions with two local municipalities (not any of the five WestCOG towns) for PSAP services. If SWRCC is awarded these two contracts, there are monies available from the state (up to \$300,000) to pay the cost to move technology to a regional center. To qualify for this grant, there must be three or more PSAPs served by the center. If these other two (non-WestCOG) municipalities join SWRCC, adding just one WestCOG town can benefit the entire funding model. An additional variable will be if SWRCC will need to expand at their current location to accommodate the added municipalities. Their current location is prepared for potential expansion, but the costs of this expansion would need to be factored into the costs.

PSAP	One Time grant from State if 3 PSAPs join SWRCC	Annual Recurring costs, inclusive of all expenses, with CT state grants applied	Recurring grants from State if three towns join (if not, must be added to annual costs)	Total Annual Cost to Town if no other town joins SWRCC (previous 2 columns combined)
New Canaan	(\$300,000)	\$394,153	(\$131,702)	\$525,855
Redding	(\$300,000)	\$177,937	(\$57,594)	\$235,531
Ridgefield	(\$300,000)	\$487,656	(\$128,908)	\$616,564
Weston	(\$300,000)	\$199,816	(\$64,467)	\$264,283
Wilton	(\$300,000)	\$358,741	(\$121,958)	\$480,699

Table 10 Potential Cost Model

Stakeholders	Benefits	Concerns/Impact of Option #1
First Responders	Improved workflows, business processes, and public safety operations; Increased safety to citizens and public safety personnel as a result of enhanced staffing; unified utilization of radio systems	A solution would be required for police department 24/7 lobby services; perceived lack of control over public safety operations; and towns with their radio systems would still be responsible for maintaining those systems
Residents/Public	Improve 9-1-1/PSAP capacity and capabilities; improved staffing to manage 9-1-1 calls and incidents; eliminate/reduce 9-1-1 call transfers; improved response time for incidents	Perceived lack of access to “safe building” after-hours (e.g., police lobby service)
Town officials	Region-wide conformance to industry best practices; Cost savings for shared services via economies of scale, and State of Connecticut grants for combining three or more PSAPs. Note: Governance model is already established at SWRCC (representatives for Weston, Wilton, and New Canaan already sit on the SWRCC Governance Board)	Towns must all agree on location, design, governance, workflows and business processes of new PSAP; For the cost model to be most beneficial, all towns must participate (a minimum of three towns is required for grant funds)
Telecommunicators/ Dispatch Personnel	Improved call taker/dispatcher environment; enhanced staffing reduces unnecessary workload; and utilization of	Union contracts, where they exist, will need to be negotiated and migrated to the regional environment

	current call taker/dispatcher personnel	
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Table 11 Benefits and Concerns with a Regional Center Solution

Recommendations

1. Winbourne Consulting recommends that the chief elected officials and public safety leaders in each town determine the priorities of each town, and the region's, public safety services and develop a detailed plan for implementation of these services. Specifically, an evaluation of the desire to meet public safety industry standards is critical in determining this direction.
2. Winbourne Consulting recommends that leadership in multiple towns in WestCOG develop a plan for participation in SWRCC. For example, the towns of Weston and Redding could develop an implementation plan to migrate their 9-1-1 call answering and dispatch services to SWRCC and lead this effort for the other towns in WestCOG.

We suggest Weston and Redding due to their current size and the limited impact that this added call volume would have on SWRCC. SWRCC could provide (or update) their proposal for the migration of these two towns. Consideration would be needed for the transition of the current dispatch staff of these centers, especially with regard to union and personnel issues. A solution would be required if department communication center personnel are moved to a new location and can no longer complete tasks such as 24/7/365 lobby services.

3.2 Significant 9-1-1 call Transfers

Finding

All WestCOG PSAPs routinely utilize some form of call transfer to respond to 9-1-1 calls.

The table below summarizes the process used by each PSAP in the response to 9-1-1 calls:

PSAP	9-1-1 Call	Police	Fire	EMD	EMD Pre-Arrival
New Canaan PD	Self	Dispatches	Transfers	Transfers	Transfers
Redding PD	Self	Dispatches	Dispatches	Dispatches	Transfers
Ridgefield PD	Self	Dispatches	Transfers	Transfers	Transfers
Weston ECC	Self	Dispatches	Dispatches	Dispatches	Transfers
Wilton PD	Self	Dispatches	Dispatches	Transfers	Transfer

Table 12 Process used by each PSAP in response to 9-1-1 calls

The transfer of a 9-1-1 call (to fire, EMD, or to another PSAP) adds time to the overall call processing and response time.

In smaller PSAPs, such as WestCOG PSAPs, the process of transferring a call to CMED for EMD pre-arrival instructions is important to alleviate the responsibility of the call taker in the PSAP from the often lengthy and focused process of providing EMD, and this process should not be discouraged or penalized at this point.

In addition, some PSAPs transfer a significant volume of 9-1-1 calls to neighboring PSAPs suggesting that the cell sectors for some cell towers may benefit from adjustments.

The following table summarizes the total call transfers compared to the total 9-1-1 calls:

PSAP	%
New Canaan	33%
Redding	19%
Ridgefield	34%
Weston	17%
Wilton	25%

Table 13 Call (9-1-1) Transfers by Volume

Options and Recommendations

A Universal Call Taker is a person trained to answer 9-1-1 calls and dispatch for all three disciplines: fire, law, EMS. This method of call taking/dispatch does not rely on transfers.

Benefits of a Public Safety 9-1-1/Universal Call Taking Initiative

A Universal Call Taking (UCT) initiative provides the opportunity to significantly improve both the effectiveness and time efficiency of 9-1-1/Emergency Communications Center, law enforcement and fire/rescue operations.

If implemented correctly, tangible and measurable benefits of UCT include:

- Reduce law enforcement/fire/rescue response times to a life-critical incident
- Improve law enforcement/fire/rescue coordinated response to multi-agency incidents

- Improve law enforcement/fire/rescue information sharing by leveraging a single integrated CAD/Mobile/GIS system that will provide real-time information to all agencies/responders
- Enhance law enforcement/fire/rescue collaboration, communication and cooperation through the development, training, implementation and management of a UCT process
- Enhance region-wide situational awareness and command and control capabilities
- Improve the quality of service to 9-1-1 callers by
 - Eliminating the need to transfer 9-1-1 callers between two agencies
 - Eliminating the need for 9-1-1 callers to be asked the same questions by two different agencies
 - Eliminating the potential for a 9-1-1 caller to be disconnected or “lost” during the transfer process
 - Eliminating two different interpretations of 9-1-1 caller incident descriptions and the incident location
- Improve 9-1-1/Emergency Communications Center operations via
 - Enhanced overall law enforcement/fire/rescue incident awareness
 - Eliminating the current problems created by the utilization of two disparate CAD/Mobile/GIS systems
 - Reduced call taker workload with the elimination of outbound/inbound 9-1-1 call transfers, inter-agency phone calls to ask questions, and/or provide information to each other
- Improve the ability for Emergency Communications Center and law enforcement/fire/rescue agencies to generate accurate, relevant and actionable public safety statistical information

Universal Call Taking

UCT is employed by Emergency Communications Centers nationwide and is proven to provide maximum operational effectiveness and time efficiency. Common objectives of a UCT initiative include:

- Improve 9-1-1 call taking times
- Reduce overall response times
- Eliminate and/or reduce 9-1-1 call transfers
- Improve incident location and call type accuracy
- Enhance the consistency and accuracy of incident information
- Improve coordination of law enforcement, fire and EMS resources
- Improve cost effectiveness of Emergency Communications Center operations

As demonstrated in the below graphic, the employment of a UCT process eliminates unnecessary time-consuming steps in the 9-1-1/call taking process.

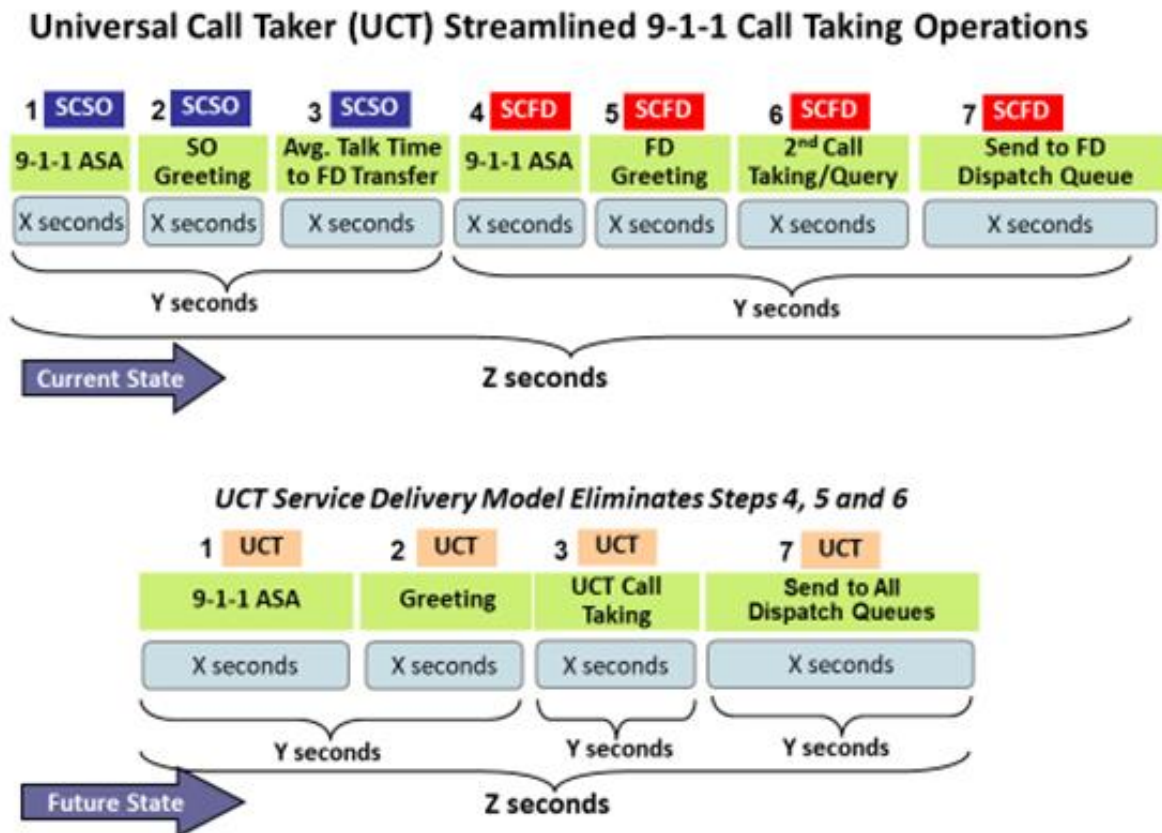


Figure 2 – Universal Call Time Metrics

One of the key components of a successful UCT program is ensuring 9-1-1 call takers have the proficiency, skills and tools to equally manage police, fire and emergency medical incidents. This is accomplished through the implementation of business process review, training, policies, procedures and technology systems to enhance the knowledge, skills and abilities of 9-1-1 call takers.

Prior to implementing a UCT process, a risk-benefit analysis should be completed to ensure a UCT model can be appropriately implemented to achieve the desired objectives. Critical factors that should be evaluated include:

- UCT workflow and business processes to be employed
- Desired performance objectives and metrics that will be used to evaluate the UCT initiative

- Proposed overall governance and management of the UCT process
- Willingness of the departments involved to collaborate and cooperate on a joint venture
- Current and future CAD and other technology systems capabilities and limitations
- Knowledge, skills, abilities and call taking proficiency of existing personnel
- Level of effort to change existing business processes to meet UCT goals and objectives
- Design, configuration and training time required to implement a UCT model
- Planning, design, configuration, training, implementation, and support process to be employed
- Cost to implement UCT initiative

Note that the previous recommendations in section 3.1 are also applicable to this section. A Unified Communication Center will ensure that 9-1-1 calls are handled without transfers and meet the expected dispatch time, as stated by Connecticut, for dispatch in less than 90 seconds from answering of 9-1-1 call (for a primary PSAP), to less than 120 seconds from answering of 9-1-1 call (by a secondary PSAP).

3.3 Deficient Situational Awareness for Adjoining Jurisdiction Incidents and Resources

Finding

The five jurisdictions do not have a CAD-to-CAD interface or the resources for real-time situational awareness for emergency and non-emergency incidents that have occurred at the jurisdiction boundary.

However, all of the Towns share jurisdictional boundaries with other towns. For example:

- *Ridgefield/Redding*
- *Ridgefield/Wilton*
- *Redding/Weston*
- *Redding/Wilton*
- *Wilton/Weston*
- *Wilton/New Canaan*

All of the PSAPs are dependent on a phone call from another PSAP to advise them of the precise action to take. Note: All stakeholders advised they attempt to listen to other jurisdictions' activity by radio scanning when possible. However, occasional radio scanning is not a formal solution for life-critical incidents when "seconds count." A scanning solution is

dependent on luck versus planned operations (e.g., the correct person just happened to be available and listening to the scanner when it was dispatched).

As described elsewhere in this report, each PSAP often has (or only has) just one person working in the PSAP and attempting fulfill all activities (e.g., incoming 9-1-1 calls, incoming administrative calls, radio traffic, and outbound calls such as notifications). During a life-critical emergency, it is not humanly possible for one person to complete all of the required tasks in a time efficient and operationally effective manner. Delays, brevity and human error will occur due to the design of the workflow. Additionally, the one person at the PSAP being contacted about an emergency incident could also be busy with other tasks which can also causes delays and errors.

All of the departments have some form of mutual aid agreement with bordering jurisdictions. No department maintains accurate information regarding mutual aid performance metrics (e.g., notification, dispatch, arrival, etc.).

Nationwide, 80% or more of all 9-1-1 calls are made from cell phones. For 2019, the five WestCOG towns averaged between 61% and 81% for wireless 9-1-1 calls (e.g., 61%, 66%, 69%, 70% and 81%). All stakeholder departments advised that 9-1-1 calls are often delivered to the incorrect PSAP. Depending upon the type of incident and other factors, each PSAP may take a different action, including:

- *Transferring the 9-1-1 call to the correct PSAP*
- *Obtaining the information, disconnecting from the 9-1-1 caller and then contacting the correct PSAP*

It is important to note that each stakeholder department advised their personnel can have difficulties identifying the exact jurisdiction of the incident. No PSAP employs a region-wide Geographical Information System (GIS map) that provides up-to-date precise geographic information.

All stakeholder departments advised real-time situational awareness is an important objective and requires improvement for the five WestCOG towns.

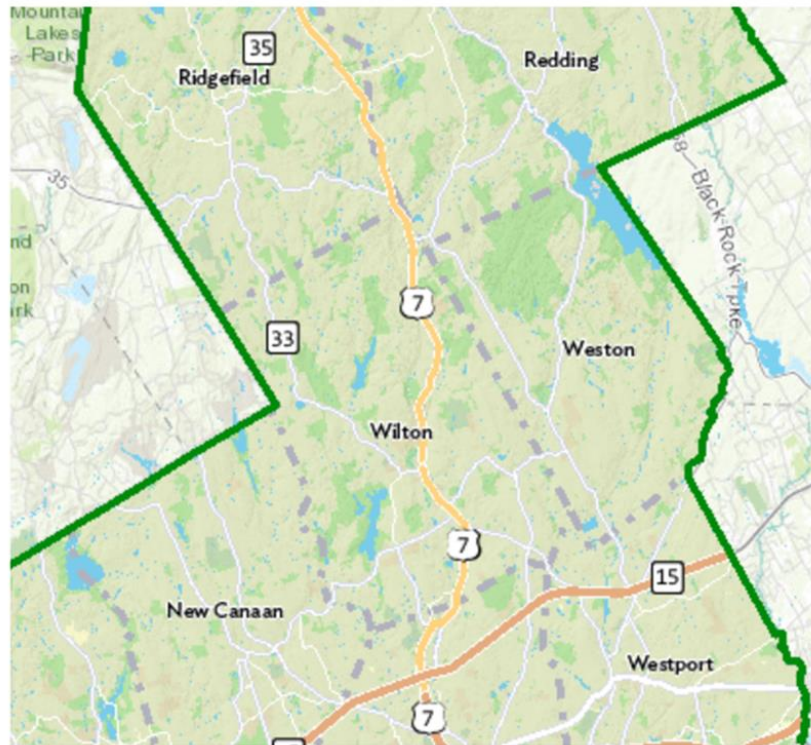


Figure 3 – Geographic Relationship of Five WestCOG Towns

Options and Recommendations

Real-time situational awareness by all the relevant jurisdictions should be a mandatory operational requirement for each city's PSAP operations. Real-time situational awareness will enhance the following:

- *The safety of public safety personnel and citizens*
- *Improve response times to life-critical, emergency and non-emergency incidents*
- *Provide the WestCOG public safety departments with a single Common Operating Picture of relevant activity and resources*
- *Enhance the allocation and deployment of resources (e.g., the correct resource is sent to the incident)*
- *Reduce human errors, delays, manual tasks and stress to one-position PSAP personnel*

This can be accomplished by:

- *Consolidation of the multiple PSAPs into a single PSAP*
- *All the PSAPs operating from the same CAD/Mobile system*
- *The implementation of a CAD-to-CAD interface to connect each PSAP with each other*

Cost Benefit Analysis of Recommended Solutions

Combined PSAP Solution

Transitioning all the PSAPs to a single PSAP is a long-term and complex project. Factors include:

- *Governance*
- *Funding*
- *Primary and secondary PSAP locations*
- *PSAP facility standards*
- *Plan and project management*
- *Construction and/or remodel*
- *Technology systems – 9-1-1, CAD/Mobile, GIS/Map, Radio, Logging and Recording, etc.*
- *Combined PSAP and Public Safety operations – Workflows, business processes, policies and procedures*
- *Transition of PSAP personnel*

A combined PSAP solution usually requires a significant initial investment of funding, time, and resources. A Return on Investment (ROI) for a combined PSAP solution is achieved over the long-term (e.g., numerous years). A combined PSAP solution can be implemented in phases starting with a smaller number of departments and gradually adding new departments to PSAP operations.

Single CAD/RMS System

A single CAD/RMS system provides the highest ROI for numerous reasons including:

- *Time to implementation (e.g., faster than new PSAP facility construction/re-model)*
- *Achieves all operational objectives – Common Operating Picture, real-time situational awareness, eliminates unnecessary duplicate actions, etc.*
- *Is required for a combined PSAP solution (e.g., Phase 1 of a multi-phase plan to transition to a combined PSAP)*
- *Cost effectiveness achieved from all stakeholders contributing to a single system*

Public Safety Strategic Objectives

A critical success factor to successfully procure, install, configure, train and transition to a new CAD/RMS system is the development of a Public Safety Strategic Plan to ensure the new system can achieve all desired objectives. Examples of strategic objectives include:

- *Operate at maximum operational effectiveness and time efficiency*
- *Improved safety for public safety personnel and citizens*

- Improve the quality of 9-1-1/communications, fire, EMS, law enforcement and emergency management work products
- Improve response times/performance metrics
- Provide objective, accurate, timely, relevant and precise information for actionable decision making
- Analyze and improve the deployment of personnel and resources
- Enhance employee productivity and capabilities
- Improved ability to make data driven decisions
- Improve information management
- Identify crime and workload trends and patterns
- Capable of valid and reliable analytics, statistical analysis, and data mining
- Improve internal and external customer satisfaction
- Measure the effectiveness of strategies and tactics in a timelier manner
- Eliminate redundant and repetitive action
- Enhance personnel and equipment request justification
- Provide a dependable, reliable and high-performing CAD/RMS system for public safety consistent with applicable public safety industry technical standards
- Improve internal and external operational and administrative communication

It is important to educate all relevant stakeholders concerning the functionality, features and capabilities of modern CAD/RMS systems prior to initiating a CAD/RMS procurement process.

CAD-to-CAD Background Information

A CAD-to-CAD interface is a solution when there is no capability or desire for stakeholder departments to operate from a single CAD/Mobile system.

Communications Interoperability

The Department of Homeland Security (DHS) defines “*Communications Interoperability*” as “*the ability of public safety agencies to talk across disciplines and jurisdictions via radio communications and systems, exchanging voice and/or data with one another on demand, in real time, when needed, and as authorized.*” CAD-to-CAD is a component of a Communications Interoperability plan.

Benefits of a CAD-to-CAD System

A CAD-to-CAD (C2C) solution allows disparate CAD systems to share incident information in a real-time manner. A C2C solution provides each PSAP and the agencies the PSAP serves the ability to respond to an incident that was created in another jurisdiction's CAD system. The ability for two or more CAD systems to communicate directly with each other provides numerous tangible benefits including:

- Improved ability to save lives, apprehend criminals and prevent property damage as a direct result of reduced response times (e.g., closest resource is dispatched to the incident)
- Streamlined communication between PSAPs:
 - Life-critical incidents are routed directly to the appropriate dispatcher (e.g., CAD system queue for the appropriate response area, district, zone or beat)
 - Dispatchers and personnel in the field receive all relevant information as it occurs (e.g., initial incident information, updates, escalations, de-escalations, cancelations)
 - Elimination of the potential for human error due to multiple personnel being involved the communication process between PSAPs (e.g., call taker from PSAP2 misunderstands the incident address provided by PSAP1)
- Improved utilization of public safety resources (e.g., the correct type, complement and concentration of resources – law enforcement, fire, and EMS - are assigned to an incident versus dispatching resources “in the blind” from not knowing what resources are close to or required to manage the incident)
- Enhanced ability to have real-time countywide situational awareness and a common operating picture
- Improved ability to manage and measure the operational effectiveness and workload of automatic aid and mutual aid agreements
- Improved ability to manage incidents that require a multitude of public safety resources (e.g., mass casualty incident, active shooter, natural disaster, severe weather event, domestic terrorism event)
- Improved call taker availability by reducing intercom and telephone calls between PSAPs

Basic Standard CAD-to-CAD Interface Features

<i>Sending from the Local to Remote CAD</i>	<i>Receiving from the Remote CAD</i>
<i>Incidents can be sent manually or automatically</i>	<i>Incidents will be automatically created and geo-verified in the local CAD</i>
<i>Automatic sending can be triggered by:</i>	<i>Incidents cancelled on the remote CAD can trigger:</i>
<ul style="list-style-type: none"> <i>Response area</i> 	<ul style="list-style-type: none"> <i>Incident cancellation</i>
<ul style="list-style-type: none"> <i>Problem/Nature</i> 	<ul style="list-style-type: none"> <i>Incident comment</i>
<ul style="list-style-type: none"> <i>Response Plan</i> 	<ul style="list-style-type: none"> <i>Notification to the local users</i>
<ul style="list-style-type: none"> <i>Response Priority</i> 	<i>Supports acknowledgements and heartbeats</i>
<ul style="list-style-type: none"> <i>Agency or Jurisdiction</i> 	<i>Standard CAD-to-CAD Text Messaging</i>
<ul style="list-style-type: none"> <i>Response Area and Problem/Nature</i> 	
<i>Incident data includes basic demographic and location, comments, cancellation and call closing</i>	
<i>Supports acknowledgements and heartbeats</i>	
<i>Standard CAD-to-CAD Text Messaging</i>	

Table 14 Basic C2C Interfaces

Advanced Standard CAD-to-CAD Interface

The advance interface provides the following capabilities in addition to all the capabilities of the basic interface.

<i>Sending from the Local to Remote CAD</i>	<i>Receiving from the Remote CAD</i>
<i>For configured units:</i>	<i>For configured units:</i>
<ul style="list-style-type: none"> <i>Position updates (AVL)</i> 	<ul style="list-style-type: none"> <i>Position updates (AVL)</i>
<ul style="list-style-type: none"> <i>All status changes</i> 	<ul style="list-style-type: none"> <i>All status changes</i>
<ul style="list-style-type: none"> <i>Vehicle capabilities</i> 	<ul style="list-style-type: none"> <i>Vehicle capabilities</i>
<ul style="list-style-type: none"> <i>Notification comments</i> 	<ul style="list-style-type: none"> <i>Notification comments</i>
<ul style="list-style-type: none"> <i>Designate an incident for an agency</i> 	<ul style="list-style-type: none"> <i>Create incidents in the designated agency</i>

Table 15 Advanced C2C Interfaces

The design through implementation of a CAD-to-CAD solution requires robust communication, collaboration, and cooperation between the involved stakeholders. Five key elements that must be completed for a CAD-to-CAD solution to be successful are:

1. Governance/funding
2. Workflows, business processes, and procedures
3. Technology
4. Training and exercises
5. C2C utilization

CAD-to-CAD Operational Objectives

- Reduce law enforcement and fire/EMS response times to life-critical incidents
- Improve the speed and quality of information transmission between law enforcement and fire/EMS for life-critical incidents
- Improve the safety of public safety personnel and the citizens they serve
- Improve the quality of service provided to 9-1-1 callers by eliminating unnecessary and redundant questioning by call takers from two different agencies
- Streamline public safety operations through new workflows, business processes, policies, procedures and training
- Improve real-time situational awareness for law enforcement and fire/EMS personnel
- Improve command and control capabilities for major incidents via an enhanced public safety Common Operating Picture
- Improve the ability for law enforcement and fire/EMS to make real-time dynamic decisions to enhance the allocation and deployment of resources
- Improve the Emergency Communications Center environment and call management capacity through the reduction of inter-agency phone and intercom calls
- Reduce the potential for miscommunication/human error between PSAPs
- Improve the accuracy and quality of fire/EMS response time metrics
- Ensure all applicable public safety system security and information management protocols are included in the design of the CAD-to-CAD solution
- Ensure the CAD-to-CAD interface is robust, dependable and provides the required performance for life-critical operations

CAD-to-CAD (C2C) Action Plan

Executive Direction

- A combined directive is required to ensure all stakeholders clearly understand executive direction and their role to achieve success for the C2C project
- Since this is a new Concept of Operations for WestCOG Public Safety departments, the directive should clearly provide the C2C Project Team with the authority to innovate, problem solve, and develop new combined workflows, business processes, policies and procedures

C2C Project Team

- Executive Steering Committee (ESC)
 - Responsible for the overall success of the C2C Project
 - Responsible for a governance structure and funding agreement
- C2C Project Manager
 - Responsible for management of the approved Project Plan
 - Responsible for C2C progress reports to the Executive Steering Committee
- Core C2C Team
 - Technical
 - Interface between the CAD systems
 - Security protocols
 - Testing and implementation
 - 24/7/365 support and maintenance
 - Operational
 - Designated types of incidents
 - Workflows, business processes, policies and procedures
 - Training curriculums
 - Testing and implementation
 - Ongoing evaluation and measurement of the C2C process
- CAD/Mobile System Assessment
 - Engage current CAD/Mobile companies

CAD-to-CAD Cost Factors

Cost factors for a C2C solution include:

- *Capability and capacity of the current CAD systems*
- *Is any system modification and/or customization required?*
- *Ability to incorporate a real-time interface to other CAD systems*
- *Ability to take relevant action based on incoming CAD data*

- *Cost for each CAD system (e.g., develop and implement the C2C interface)*
- *Type of C2C solution employed*
- *Intelligent hub (e.g., if X, take Y action)*
- *Machine-to-Machine (e.g., requires human intervention - no automatic logic involved)*
- *Recurring costs to maintain the interface as each CAD/Mobile system is updated/upgraded*

A C2C solution for the five towns could be cost prohibitive when compared to the Total Cost of Ownership for a new CAD/Mobile or CAD/RMS system.

3.4 No Formal CAD/Mobile Information Sharing Requirements

Finding

Directly related to the situational awareness issue, the five jurisdictions have no ability to share information in real-time including:

- *Be On the Lookout (BOLO)*
- *Wanted persons*
- *Suspicious vehicles and/or persons*
- *Historical information (e.g., Tag # ABC-123 was stopped by an officer this morning for suspicious activity)*

Options and Recommendations

Real-time CAD/Mobile information sharing by all the relevant jurisdictions should be a mandatory operational requirement for each city's PSAP operations. Real-time information sharing will enhance

- *The safety of public safety personnel and citizens*
- *Reduce human errors, delays, manual tasks and stress to one-position PSAP personnel*

This can be accomplished by:

- *Consolidation of the multiple PSAPs into a single PSAP*
- *All the PSAPs operating from the same CAD/Mobile system*
- *The implementation of a CAD-to-CAD interface to connect each PSAP with each other*

3.5 Disparate CAD/Mobile Systems

Finding

The PSAPs have not realized any economies of scale in sharing technology system acquisitions and ongoing maintenance costs.

The five jurisdictions utilize different CAD/Mobile systems:

Town	Police CAD	Fire CAD
New Canaan	Nexgen	Dispatched by Westport Fire, VisionAir (today) and Nexgen in the future; no New Canaan police to fire CAD interface
Redding	Accucom	Accucom for all 3 fire departments
Ridgefield	Nexgen	FD in process of integrating with Nexgen CAD
Weston	Accucom	Accucom
Wilton	Nexgen	Nexgen, integrated with police (Wilton EMS is dispatched by CMED)

Table 16 CAD/Mobile Systems by Agency

Each jurisdiction completed a contract for the CAD/Mobile system on their own. There are no partnerships between any jurisdictions for any CAD/Mobile system thus not achieving any benefits from economies of scale.

Because there is no interface between the various CAD/Mobile systems, each jurisdiction configured their CAD/Mobile system on their own without any information from a department that is using the same exact CAD/Mobile system.

Most of the departments did not have someone assigned to be an expert about the CAD/Mobile (e.g., system administrator) with a complete understanding of all functionality, features and capabilities of the system. Each department is constrained to complete the best they can do with their limited resources.

All departments advised they were unsure if their CAD/Mobile system was designed for maximum operational effectiveness and time efficiency.

Options and Recommendations

There is valid business case for the five jurisdictions to purchase and implement the same CAD/Mobile system. Benefits include:

- *Reduced cost from economies of scale – Instead of each jurisdiction paying the Total Cost of Ownership (e.g., TCO - all initial and recurring costs), the TCO can be shared by the five jurisdictions*
- *Provides the ability for all PSAPs to be on the same CAD/Mobile system to achieve real-time situational awareness and information sharing objectives*
- *Reduced Level of Effort – Instead of each department training their own system administrator, a shared resource can be leveraged*

CAD/Mobile and CAD/RMS Cost Factors

- *Infrastructure/Architecture*
- *On-premise – Data Center physical and network security, servers, racks, electrical/Uninterrupted Power Supply (UPS), generator, HVAC (primary and secondary), fire protection*
- *Hosted solution – Internet Service Provider*
- *Applications and modules*
- *CAD*
- *Mobile*
- *GIS/Mapping*
- *Automatic Vehicle Location (AVL)*
- *Records Management System*
- *Business Intelligence/Analytics*
- *Interfaces*
- *9-1-1*
- *Radio*
- *Logging and Recording*
- *Data conversion*
- *Legacy systems*
- *Licenses - Law enforcement, fire/rescue and emergency medical services*
- *Equipment - PC/workstations, Mobile Data Computers, tablets*
- *Personnel*
- *Technical system administration*
- *Operational system administration*

3.6 Disparate Geographical Information System (GIS)

Finding

GIS/Mapping is a mission critical system that is required for professional PSAP operations. GIS data is utilized for:

- *9-1-1 caller location – Wireless and wireline*
- *Incident location – Not all locations have a street address, or the street address does not provide operational value (e.g., roadway, large city park, trail, etc.)*
- *Precise jurisdiction an incident is located*
- *Public safety personnel location via Automatic Vehicle Location (AVL)*
- *Premise hazards and alerts – Provide advanced warning to responding personnel about a dangerous condition (e.g., threats to law enforcement, violent emotionally disturbed person, hazardous materials at the location, etc.)*
- *Statistical analysis based on geographical parameters*

There is no formal city or regional Public Safety GIS Master Plan or PSAP GIS Master Plan. This includes:

- *No Inter Local Agreement (ILA) regarding region-wide public safety GIS objectives*
- *No sharing of GIS data with other jurisdictions*
- *No plan for the implementation of NENA NG911 GIS standards*
- *No PSAP specific GIS Master Plan*
- *No formal region-wide GIS governance structure or executive committee to provide direction*
- *No primary staff/position responsible for region-wide public safety GIS objectives*
- *No formal plan regarding precise address/incident location validation and quality assurance of the Master Street Address Guide (MSAG)*
- *No formal roles and responsibilities among the five jurisdictions regarding leveraging GIS data. For example:*
 - *Mission critical locations – Schools, government buildings, hospitals, etc.*
 - *Pre-Incident Plans*
 - *Premise hazards and alerts*
 - *Business names*
 - *Alias names*
 - *No GIS service level map (e.g., mutual/automatic aid into adjacent jurisdictions)*
 - *No consistency of region-wide PSAP operations regarding the utilization of the mapping application*

As with the other technical systems, the towns do the best job possible regarding GIS given their funding and personnel constraints.

Options and Recommendations

- *Implement a region-wide Public Safety GIS Master Plan Initiative*
- *Develop a Concept of Operations for how GIS data will be employed. For example:*
 - *Leverage existing GIS standards, guidelines and best practices (e.g., Employ NENA GIS standards for 9-1-1 address validation)*
 - *Enhance the ability to precisely locate an incident location*
 - *Employ a single map enterprise-wide (e.g., all WestCOG public safety departments) to obtain a single common operating picture and situational awareness*
 - *Enhance the ability to make dynamic decisions regarding the allocation and deployment of resources*
 - *Reduce response times to life-critical incidents via leveraging Automatic Vehicle Location (AVL) capabilities for closest unit dispatching*
 - *Enhance the safety of public safety personnel via premise hazard alerts*
 - *Develop critical response plans (e.g., active shooter, pre-fire plan, etc.)*
 - *Current state assessment*
 - *Evaluate and define current GIS data. For example:*

Layer	Definition
Street Center Lines	AVL routable streets
Address Points	Point for each address
County Boundary	Boundary for the County
City/Community	City/Community names
PSAP Boundary	PSAP name and boundary
Parcels	Defines the parcels
Police Agency	Defines the responsible police agency
Police Beats	Defines the police beat
Police Reporting Area	Defines the police reporting (sub-beat)
Fire Agency	Defines responsible fire agency
Fire Response Area	Defines the station ordering for an area
Fire Map Page	Defines the Fire Map Page
Fire Target Hazard	Defines a special response for fire
EMS Agency	Defines the EMS agency
EMS Zone	Defines the EMS response zone

EMS Target Hazard	Defines the EMS special response area(s)
Zip Code	Defines zip code boundaries

Table 17 GIS Layer Definitions

- Identify any GIS data that is known (current state) to need enhancement or is missing and should be added. Example:
 - Aliases values for Street Centerlines and Address Points
 - Common Place Names
 - Sub-addresses, apartment numbers, buildings, units, suites, split address values, etc.
 - Cross Streets
 - Trails/Paths
 - Building Footprints
 - 3D Building layers
 - Orthophotography
 - Census Tract
 - Voting District
 - Address flags/Premise Hazards
 - Address contacts
 - Existence of pre-plans values
 - Existence of Response plan
 - Beat/Beat assignments
 - Run Card
 - Culverts
 - Hydrology (water bodies, lakes, rivers, streams, etc.)
 - Cell tower sectors
 - Radio channel/Frequency
 - Mutual Aid
 - Railroads
 - Fire hydrant locations and values
 - Hazmat locations and values
 - Milepost/Mile markers
 - Z values (bridge, overpass, underpass heights)
 - Weight restrictions
 - Width restrictions
 - Turn restrictions
 - Speed Limits
 - Intersections
 - Gate codes for restricted assess areas

- Road hierarchy (state highway, arterial, local road, etc.)

GIS Staffing Considerations

It is important to recognize there are three distinct levels of effort:

- *Current state assessment*
- *Enhance current GIS data to meet new public safety GIS requirements*
- *Maintain and continue to improve GIS data once it has been enhanced to the desired level*

Depending upon the level of effort required to enhance public safety GIS data to the desired level, it may be more time efficient and operationally effective to outsource the work required since it is a one-time level of effort.

There are multiple models the WestCOG towns could employ regarding the establishment and support of a public safety GIS initiative:

- *City GIS responsibility – A city GIS department could assume full responsibility for the region through a cost sharing agreement and provide a formal Service Level Agreement to the public safety departments*
- *Outsource - The city jurisdictions could determine they do not have the resources to complete some required tasks in a timely manner and outsource these tasks to an external company for completion*

The number of Full Time Employee (FTE) GIS positions dedicated to public safety GIS is dependent on Concept of Operations for GIS and WestCOG public safety minimum mandatory GIS requirements. For a jurisdiction the size of WestCOG and the multitude of towns, a minimum of one and possibly two FTEs should be considered as a starting point for this discussion.

4.0 Data Management

4.1 No Strategic Plan Regarding the Procurement and Implementation of Public Safety Technology Systems

Finding

According to the Bureau of Justice Statistics, “there are 17,985 police agencies in the United States including City Police Departments, County Sheriff's Offices, State Police/Highway Patrol and Federal Law Enforcement Agencies...About half (49%) of all agencies employed fewer than 10 full-time officers...and more than two-thirds (71%) of local police departments served populations of less than 10,000 residents.”

As demonstrated in the below table, the towns of New Canaan, Redding, Ridgefield, Weston and Wilton are not large jurisdictions with large public safety departments.

Town	Population	Sworn Officers
New Canaan	20,000	47
Redding	9,400	15
Ridgefield	25,000	41
Weston	10,000	17
Wilton	18,500	44

Table 18 Town, Population, Sworn

However, there is an expectation that all public safety departments, large and small, employ industry accepted standards, guidelines and best practices. This is directly related to the important work completed by police, fire and EMS departments. For example, a citizen in a small town has the same expectation for time efficient and operationally effective 9-1-1 operations as a citizen from a larger city.

It is often cost prohibitive for small jurisdictions to employ their own public safety technology system. Many small jurisdictions nationwide benefit from developing partnerships with other jurisdictions to procure, implement and support public safety technology systems.

The five WestCOG towns each purchased a CAD/RMS system on their own with no involvement from another jurisdiction. For example, each town employed their own procurement process, selected a CAD/RMS company, negotiated a contract and implemented the CAD/RMS system without any input or assistance from another town.

The five towns purchased a CAD/RMS system from two companies – Nexgen and Accucom. As demonstrated in the below table, each law enforcement department leverages their CAD/RMS system for the same modules.

Jurisdiction	CAD/Mobile	RMS	JMS	P & E
New Canaan	Nexgen	Nexgen	Nexgen	Nexgen
Redding	Accucom	Accucom	Accucom	Accucom
Ridgefield	Nexgen	Nexgen	Nexgen	Nexgen
Weston	Accucom	Accucom	Accucom	Accucom
Wilton	Nexgen	Nexgen	Nexgen	Nexgen

Table 19 CAD/RMS Systems by Agency

While all the public safety departments work in a collaborative manner with each other concerning mutual aid related incidents and some training initiatives, there is no region-wide strategic plan regarding public safety operations and technology systems.

Options and Recommendations

CAD/RMS and other public safety technology systems are designed for multi-agency and multi-discipline utilization. An economies of scale model demonstrated the five jurisdictions could each benefit financially from purchasing and implementing the same CAD/RMS system versus acting in an independent manner. For example, the five towns would have more negotiating and purchasing power acting as a single entity than five individual jurisdictions. And at the same time, receive a significant financial benefit from sharing the Total Cost of Ownership of the system being purchased and implemented.

The below graphic shows how each of the five jurisdictions operate in a silo to purchase, implement and support public safety technology systems. In this model, each jurisdiction pays 100% of the Total Cost of Ownership for a technology system.

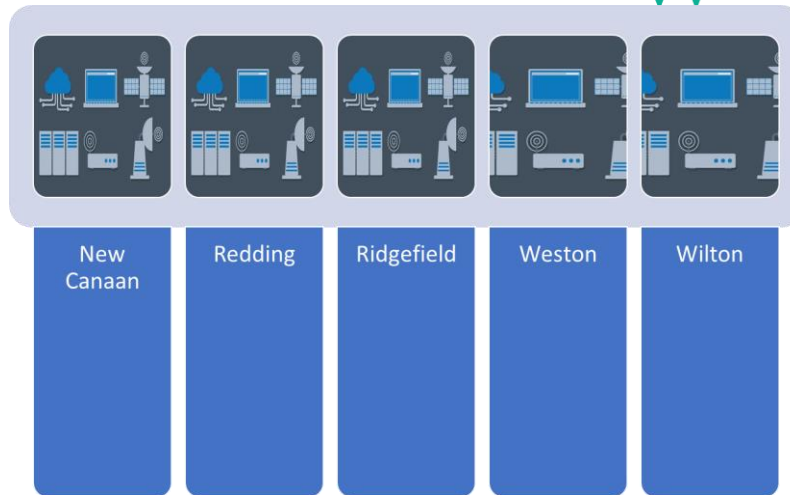


Figure 4 – Silo Illustration

This below graphic demonstrates the benefit of the five jurisdictions sharing all initial and recurring costs for a technology system. Each jurisdiction would be paying a significantly less amount using this methodology.

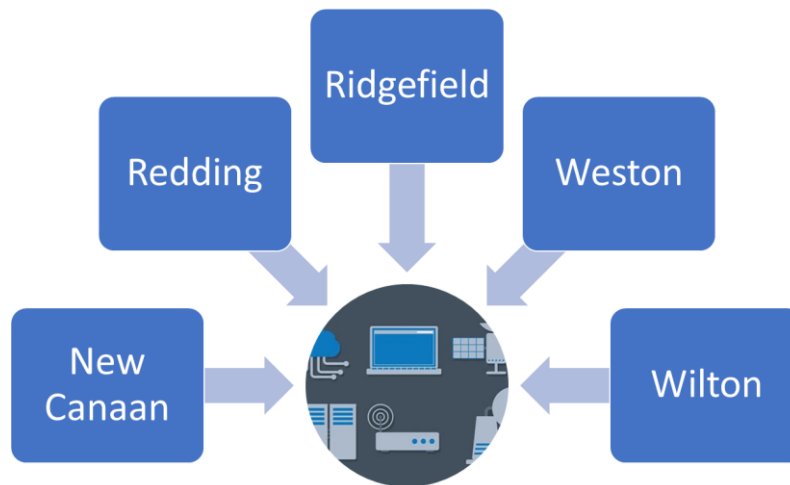


Figure 5 – Economies of Scale Illustration

The recommendations made in Section 3 regarding the employment of a single CAD/RMS system are applicable to this section.

Governance Structure

The five towns should develop and implement a governance structure that allows them to purchase, implement and support technology systems as a group versus independently.

A charter and governance model should be developed with stakeholder input that clearly defines:

- Strategic operational objectives
- Concept of Operations
- Governance structure
- Decision making authority at each level
- Roles and responsibilities for all stakeholders
- Conflict resolution
- Communication Plan
- Cost sharing formula

Total Cost of Ownership (TCO)

For each technology system, precise information regarding the Total Cost of Ownership (e.g., all relevant initial and recurring costs) should be developed. The foundation for the TCO includes:

- Goals and objectives for the system/initiative
- Project scope – What will be purchased and not purchased

Using a CAD/RMS system as an example, the TCO should examine initial and recurring costs for all relevant cost factors including:

- COTS application, software licenses, implementation/project management, training, support and warranty
- Infrastructure costs – Data center, servers, networks
- Secondary Data Center – Hot, warm or cold failover process, upgrade to infrastructure and/or equipment
- Secondary PSAP – Enhancement or upgrade to infrastructure and/or equipment
- GIS – Cost to enhance GIS data
- Business Intelligence/Analytics system
- Interface costs – CAD-to-CAD, 9-1-1, radio, state/NCIC, L & R, LRMS, FRMS, ePCR, etc.
- Data conversion – Legacy CAD/RMS systems
- Equipment purchase - Workstations/monitors
- Mobile Data Computers – MDC specifications and number required
- Tablets/smartphone licenses – Concept of Operations to leverage smartphones and tablets

- Full-Time Employees (FTEs) – Any new positions required to configure, implement and maintain the new CAD/RMS system
- External services – Is there a need for any assistance implementing the new CAD/RMS system
- Overtime – Overtime funding required to train key personnel

4.2 No Real-Time Information Sharing

Finding

None of the five CAD/RMS systems are interfaced to another CAD/RMS system prohibiting the ability to benefit from real-time information sharing.

Options and Recommendations

Real-time information sharing by all the five jurisdictions should be a mandatory operational requirement for each town's public safety operations. Real-time information sharing will enhance the safety of public safety personnel and citizens and improve time efficiency and operational effectiveness. This can be accomplished by:

- *All departments operating from the same CAD/RMS system*
- *The implementation of an interface to connect each CAD/RMS systems with each other*

The recommendations made in Section 3 regarding the employment of a single CAD/RMS system are applicable to this section.

4.3 Improve Public Safety Technology System Expertise

Finding

Most of the departments did not have someone specifically assigned and trained to be an expert for each technology system. No department had a system administrator who had a comprehensive understanding of all functionality, features and capabilities each system can provide. Each department is constrained by staffing and funding limitations and complete the best they can do with their limited resources.

All departments advised they were unsure if their CAD/RMS system was designed for maximum operational effectiveness and time efficiency.

Options and Recommendations

To fully leverage a CAD/RMS system, public safety requires personnel with the appropriate level of knowledge, skills, abilities and bandwidth. There are two key positions that must be sufficiently staffed

- *Technical System Administrator – Responsible for the technical aspects of the system (e.g., servers, racks, networks, workstations and Mobile Data Computers)*
- *Operations System Administrator – Responsible for understanding system functionality, features and capabilities; system configuration; workflows and business processes*

5.0 Property and Evidence (P&E) Storage

5.1 P & E Workflows Require Local Intake

Finding

All law enforcement departments advised, due to the limitations of on-duty staff, that it was imperative that personnel be able to impound property and evidence at each individual department's headquarters. It would be operationally ineffective and time inefficient for an officer to drive to another jurisdiction to impound items.

Due to the different court jurisdictions and district attorney office rules, it would also be operationally ineffective and time inefficient for one department to attempt to manage all property and evidence for other jurisdictions.

Options and Recommendations

The departments did not express any desire to change the current process.

5.2 Long Term Storage

Finding

All departments advised they are at capacity or over capacity for property and evidence items. There appeared to be consensus that a long-term storage solution could provide value to the departments.

Options and Recommendations

Property Destruction and Disposal Process Initiative

The destruction and disposal of property and evidence is dependent on numerous factors such as:

- *State statute and case law regarding misdemeanor and felony evidence (e.g., open and closed criminal investigations)*
- *Disposition of the case through the state court system (e.g., district attorney recommendation, case is closed, case is pending, case is on appeal)*
- *Bandwidth of personnel completing the disposal and destruction process*

A temporary initiative could be implemented that includes the five departments combining appropriate personnel into a task force that would be assigned to go through each department's Property and Evidence Section to identify and dispose of all applicable property and evidence.

Long-Term Storage Solution

The five departments expressed an interest regarding a potential long-term storage solution for large items such as vehicles, equipment and televisions. Depending upon the type of location/building secured, there is potential for other types of long-term storage such as firearms, drugs and miscellaneous items. The same aforementioned factors regarding the location of the storage facility (e.g., travel time from home jurisdiction) also apply to this solution.

6.0 Intake/Processing, Detention, and Lock-up

6.1 Large Scale Solution Required

Finding

The low volume of in-custody arrests by the five law enforcement departments inhibits cost effective solutions such as building a single jail facility for utilization by all five towns.

Law enforcement leadership also did not want on-duty personnel transporting prisoners to another jurisdiction since they would not be available for local incidents. A prisoner transport solution would be cost prohibitive due to the low number of arrests.

Options and Recommendations

None of the five law enforcement departments has a jail facility large enough to meet the capacity of all five law enforcement departments. No department has dedicated full-time 24/7/365 corrections staff making jail staffing also a prohibitive factor. Additionally, since each department does not want their sworn personnel leaving their jurisdiction to transport a prisoner to a single facility, a prisoner transport van would be required to transport prisoners as needed (e.g., post-booking, medical and court). A 24/7/365 prisoner transport solution is cost prohibitive due to the low volume of in-custody arrests.

The cost to develop, construct and maintain a new jail facility requires more than the five towns and should be a county-wide initiative that includes the State of Connecticut.

7.0 Training Room

7.1 Large Scale Solution Required

Finding

The fire/EMS departments advised their training facilities were adequate.

Law enforcement departments require training facilities for various types of training including:

- *State mandated in-service training*
- *Department and accreditation mandated training*
- *Defensive tactics training – Special padding required*
- *Pursuit Driving Simulation – Equipment, digital projector and screen requirements*
- *Firearms Simulation - Equipment, digital projector and screen requirements*

All five departments advised improved training logistics was an important topic that requires a master plan due to the complexity of the issue. The Fairfield County Police Training Officer Association (FCPTOA), which is a subsidiary of the Fairfield County Chief of Police Association, should be leveraged for both the training center and firing range issues. The FCPTOA represents 35 different law enforcement agencies which include municipal, city, environmental, transit, and university agencies.

Options and Recommendations

Executive leadership and direction are required to identify all potential solutions. The FCPTOA should be leveraged to benefit from their expertise and knowledge regarding this topic. The FCPTOA is currently in the process of implementing a region-wide training software solution. A regional training facility has been discussed at a high-level with no formal action or analysis completed. The same justification for the region-wide training software can be used for additional training initiatives.

A single law enforcement training center would be cost prohibitive for the five towns. A region-wide, solution is required.

Public/Private Partnership

Existing facilities may be leveraged and/or enhanced such as vocational schools, colleges and universities. Note: The FCPTOA has completed high-level discussions with a college and university.

8.0 Firing Range

8.1 Large Scale Solution Required

Finding

This is a significant issue for WestCOG law enforcement departments. There are a limited number of ranges in Fairfield County and each existing range has its own constraints (e.g., type of firearm that can be used, time of day it is available, cost to use, etc.).

A law enforcement firing range is a complex issue due to many factors such as:

- *Neighborhoods adjacent to a proposed firearms range may lobby political leadership to not approve the range*
- *The type of range may limit what firearms can be used (e.g., handgun, shotgun, rifle, chemical munitions)*
- *The Occupational Safety and Health Administration (OSHA) Lead Standard (29 CFR 1910.1025) has specific requirements for indoor ranges due to potential lead exposure*
- *Liability insurance for the range*
- *Certified Firearms Instructors and range management*

That said, firearms training and qualification sessions are required to maintain State of Connecticut certification, accreditation standards, reduce township liability and ensure law enforcement personnel are both confident and proficient if deadly force is required.

Executive leadership is required. As with the Training Facility, the FCPTOA should be leveraged for this issue.

Options and Recommendations

Township executive leadership provide direction to develop a master plan for law enforcement firearms training and qualification.

- *Establish an FCPTOA committee to manage the project*
- *Identify all towns that are committed to becoming cost sharing stakeholder*
- *Identify all potential locations for a law enforcement range – both indoor and outdoor*
- *Identify all initial and recurring costs for all potential solutions*

9.0 Gym Facilities

9.1 Gym Facilities Must Be Available to Every Department

Finding

All stakeholders emphasized the importance of maintaining gym equipment at each headquarters and fire stations.

All but one of the law enforcement and fire/EMS Department stakeholders advised they have gym equipment at each of their headquarters and fire stations, although this equipment is in varying condition.

Gym facilities must be available for first responders for the following reasons:

- *The physical fitness of public safety personnel is imperative to achieve:*
 - *Physical and emotional well-being of personnel*
 - *Operational effectiveness*
 - *Enhanced personnel safety during high-risk operations*
 - *Reduced injuries and medical issues*
 - *Time efficiency – Personnel can work out before or after their tour of duty without having to drive to a different location*
 - *Immediate access – Personnel are more likely to utilize the gym if it is easily accessible*

Options and Recommendations

Depending upon the type of equipment being purchased, the five towns may benefit from purchasing gym equipment as a single entity to obtain stronger bargaining power.

9.2 Gym Facilities Must be Local to the First Responder Communities

Finding

All departments advised removing gym facilities from police headquarters and fire stations would be detrimental to personnel maintaining fitness objectives. All stakeholders advised they saw no potential benefits from:

- *Creating a single gym facility for public safety personnel*
- *Contracting with a gym company or various gym companies to obtain memberships for public safety personnel*

If they have to go to next town for a gym, it is not reasonable due to distance.

Options and Recommendations

No change to the current process is necessary. Consider discounts on memberships for Planet Fitness, Edge Fitness, or LA Fitness.

Appendix A: PSAP Standards, Guidelines and Best Practices

Guidelines, standards and best practices have been developed for every aspect of PSAP operations. The following are portions of what is available to provide a high-level understanding.

9-1-1 Call Processing

- NENA 56-005 – NENA Call Answering Standard/Model Recommendation
 - Standard for answering 9-1-1 Calls
 - *Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary)*
 - *Ninety-five (95%) of all 9-1-1 calls should be answered within twenty (20) seconds*
 - Order of Answering Priority
 - *It is the responsibility of on duty telecommunicators to answer all incoming calls. All phone calls will be answered in order of priority*
 - *1st priority will be the 9-1-1 and emergency 7/10 digit phone lines; 2nd priority will be non-emergency lines and 3rd priority will be the administrative and/or internal phone lines.*
- NENA 56-001 – Guidelines for Minimum Response to Wireless 9-1-1 Calls

PSAP Operations

- *NENA 54-001 HR PSAP Operations - This document is provided as a Model Recommendation for the creation of the Daily Personnel Operations section of a Standard Operating Procedure (SOP) for use by Communications Centers and/or PSAPs as guidance in the formulation of an agency SOP*

PSAP Technology

- *APCO Core Competencies and Operational Factors and Training for Next Generation Technologies 1.115.1. 2018. This document deals with Next Generation systems and the need to write policies on the systems*

PSAP Protocols

- *NENA 56-505 – Guidelines for Handling Calls Regarding Missing and Exploited Children*
- *NENA-INF-022.2-2017 – Protocol for Handling Calls Regarding Human Trafficking Information Document*
- *NENA-STA-007.1 – Hearing Standard*
- *NENA 56-007 – NENA 56-007 Pipeline Emergency Operations Standard Model Recommendation*
- *NENA-STA-013.2-2016 – PSAP & Railroad Interaction Standard*
- *NENA 56-002 – NENA Standard for NORAD/FAA Notification: Airborne Events*

Training

- *APCO ANS CAD Minimum Requirements 1.110.1-2015 - The standard identifies minimum training requirements for public safety call takers, fire service dispatchers, law enforcement dispatchers, and emergency medical services (EMS) dispatchers.*

Quality Assurance/Quality Improvement

- *APCO/NENA ANS1.107.1-2015 – Standard for the Establishment of a Quality Assurance and Quality Improvement Program*
- *NFPA 1221 7.6 Quality Assurance/Quality Improvement. Communications centers shall establish a quality assurance/improvement program to ensure the consistency and effectiveness of event processing*

PSAP Personnel Core Competencies

- *APCO Core Competencies for Communications Manager/Director 3.109.2.2014 – This standard identifies the core competencies and minimum training requirements for The Public Safety Communications Manager/Director*
- *APCO ANS 3.107.1.2015: Core Competencies and Minimum Training Requirements for Public Safety Communications Technician*

PSAP Facility

- *NENA INF 020.2-2017 PSAP Survivability - This PSAP survivability document is meant to be used in conjunction with other Contingency Planning Documents to assist the PSAP to better prepare for and react to a disaster situation with the end goal being that the PSAP remains operational. Every PSAP is unique and this document should be used as a starting point in disaster recovery planning*

PSAP Continuity of Operations

- *NENA -INF-017.2-2015 – PSAP Disaster & Contingency Plans Model Recommendation*
- *NENA 53-001 – PSAP Contingency Plans*
- *APCO Public Safety Answering Point Service Capability Criteria Rating Scale - This standard is intended to assist Public Safety Answering Point (PSAP) Managers and their governing authorities to identify their current level of service capability. An assessment tool is provided to objectively assess capabilities of the PSAP against models representing different levels of preparedness, survivability and sustainability amidst a wide range of natural and man-made events. Using the assessment tool, PSAP Managers and Administrators will have the ability to assess the validity and completeness of the public safety communications portion of agency “Continuity of Operations Plans (COOP) against objective criteria. This evaluation is necessary to demonstrate a meaningful effort to anticipate and be prepared for sustained emergency communications services amidst disaster*

NENA 56-005 Call Answer Standard

<ANYWHERE> COMMUNICATIONS CENTER

This template is adapted from NENA 56-005, Call Answering Standard, and is for informational purposes. All procedures should be reviewed and, if needed, customized to meet local and state requirements.

Call Handling Guidelines

1. **Standard for answering 9-1-1 Calls.** Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary 00-001). Ninety-five (95%) of all 9-1-1 calls should be answered within twenty (20) seconds.
2. **Order of Answering Priority.** It is the responsibility of on duty telecommunicators to answer all in-coming calls. All phone calls will be answered in order of priority. 1st priority will be the 9-1-1 and emergency 7/10 digit phone lines; 2nd priority will be non-emergency lines and 3rd priority will be the administrative and/or internal phone lines.

3. **Standard Answering Protocol – 9-1-1 lines.** All 9-1-1 lines shall be answered “9-1-1, what is the location of the emergency?”
4. **Standard Answering Protocol – non-emergency lines.** All non-emergency lines shall be answered, "<Anywhere> Communications Center, may I help you?"
5. **Non-emergency calls received on emergency lines.** If a call is of a non-emergency nature and it is received on an emergency telephone line, the telecommunicator will advise the caller that they have called on an emergency line and will direct the caller to a non-emergency line. The call will not be transferred to an administrative line, since that may tie up the 9-1-1 trunks.
6. **Standard for information gathering.** The telecommunicator will obtain the basic information from the caller. At a minimum, this information should include: the address or exact location of the incident, call back number, type of emergency, time of occurrence, hazards, identity of those involved and their location.
 - 6.1. **Address verification.** The telecommunicator will verify all addresses reported. If the address provided by the caller matches the ALI display, the address may be considered verified. In the event there is a discrepancy, additional steps must be taken to verify the location of the incident being reported, such as repeating the address twice and/or annunciating each digit of the address if necessary, to clarify.
7. **Transferring emergency calls.** When emergency calls need to be transferred to another PSAP, the telecommunicator will transfer the call without delay. The telecommunicator will advise the caller: “Please do not hang up; I am connecting you with (name of the agency).” The telecommunicator should stay on the line until the connection is complete and all pertinent information has been relayed to the answering PSAP.
8. **Wireless 9-1-1 Calls.** Wireless 9-1-1 Calls shall be handled in accordance with the <Anywhere> Communications Center guidelines for wireless call handling.
9. **Non-Standard Calls.**

Comment: Some agencies may require a response in these (abandoned, silent, misdial,

unintentional, prank calls) or similar situations. Local policy should be inserted when adopting this document for local use. See 9.1.1 as an example.

9.1. **Abandoned calls/disconnects.** The telecommunicator will attempt a call back when a 9-1-1 call is routed to the PSAP and the call disconnects before the telecommunicator can determine if assistance is needed. The telecommunicator will call the number back once to make this determination. If the phone is busy or there is no answer, additional attempts to contact the caller will not be made by the telecommunicator. If the callback attempt goes to voice mail, no message will be left.

9.1.1. **Response to abandoned calls.** In the event a call is abandoned or disconnected before the telecommunicator can determine if emergency assistance is needed, a police unit will be dispatched to the location indicated by the PSAP display (ALI).

9.2. **Silent calls.** In compliance with Public Law 101-336, also known as the Americans with Disabilities Act, all silent calls will be interrogated with a TTY/TDD to determine if the caller is attempting to report an emergency using a special communications device for hearing impaired individuals.

9.3. **9-1-1 Misdeal.** A call is classified as a 9-1-1 misdeal when the caller stays on the line and admits to the misdeal.

9.4. **Unintentional 9-1-1 Call.** A call is classified as unintentional when the 9-1-1 personnel can hear conversation, radio, etc. in the background and have listened sufficiently and checked with a TTY/TDD to determine that there is no indication of an emergency situation.

9.5. **Prank calls.** Telecommunicators will call back a suspected prank caller. Prank calls should be treated as a real emergency until proven otherwise. The called party will be questioned to determine if further action is needed or a response is required.

9.6. **False reports.** <False or unfounded 9-1-1 calls will be handled in accordance with local policy.>

9.7. **Misrouted calls.** Calls may be received at a PSAP that are intended for another PSAP. These calls should be transferred to the other PSAP, if possible, after advising the caller of the transfer. One-button transfer capability, or other enhanced transfer method, for other PSAPs in the home county should be available to the telecommunicator. Calls of this type include Wireless (and wireline) misroutes as well as nomadic VoIP callers. Out of area PSAP contact information may be found in the NENA PSAP Registry or via the NLETS system.

9.8. **Foreign Language calls.** A foreign language translation service is available to assist in processing foreign language calls. <The procedure for contacting that service should be inserted here.>

10. **Telecommunicator Discretion.** <Modify in accordance with local policy>

10.1. **Discretion.** Telecommunicators should pay close attention to background noise, tone and word choice of the caller as additional evidence to assist with determination of the status of the 9-1-1 call. The time of day and location of the caller may be additional clues to indicate whether a response is necessary. In any situation where the telecommunicator believes an emergency situation may exist, an appropriate public safety response will be initiated.

10.2. **Cancellation.** Telecommunicators may disregard a 9-1-1 call if there is evidence that the call is one of the following situations: 9-1-1 Misdial, Unintentional or Prank Calls.

10.3. **Contact.** If contact is made with the caller, telecommunicators will follow call-handling procedures established by the local agency to determine whether a public safety response is necessary.

10.4. **Indicated Emergency.** Any evidence of an emergency situation requires that telecommunicators initiate efforts to re-contact the caller to determine the nature of the incident and an accurate location for appropriate public safety response, according to procedures established by the local agency. If attempts to contact the caller are unsuccessful, a field public safety response will be initiated based on the caller's location as indicated by the ALI display.

11. Incomplete or no data

11.1. **ALI Failure.** In the event of a failure to provide a caller location, an attempt to determine the address from which the call originated will be made through reverse look-up, where permitted, or by contacting the telecommunications service provider.

11.1.1. Upon registration with the NeuStar Integrated Voice Response (IVR) Unit, telecommunications service providers for ported or pooled numbers may be identified based on the indicated ANI. For non-ported or pooled numbers, contact information may be obtained by accessing the North American Number Plan database and the NENA Company-ID files. (See NENA Guidelines for Minimum Response to Wireless 9-1-1 Calls, Document 56-001 Section 7 for additional guidance).

11.2. **ANI failure.** In the event a 9-1-1 call received without an ANI display, the call will be treated as if received on a 7-10 digit emergency line. The telecommunicator will obtain the basic information from the caller. At a minimum, this information should include: the location of the incident, call back number, type of emergency, time frame, hazards, identity of those involved and their location

11.3. **Incorrect or no ALI-ANI information.** If the ANI or ALI information provided is not accurate, based on information provided by the caller, the telecommunicator will complete and forward the appropriate report to affect a correction.

12. Trouble reports

12.1. **Equipment problems.** All 9-1-1 telephone equipment problems will be reported immediately to the supervisor. A trouble report will be completed and forwarded to the 9-1-1 System Service Provider.

13. Call types.

<Protocols for handling the various types of calls (e.g. Police, Fire and EMS) should be established locally and approved by the appropriate authority.>

14. **Redundant Calls.** Redundant calls occur when several calls have been received on the same incident. The telecommunicator will make sure that the caller is reporting the same incident and not an unrelated one. Once the telecommunicator is sure that the caller is reporting an incident that has already been received and any additional pertinent information is

obtained, the caller will be advised that the call information has already been reported. These calls should be disconnected as soon as possible in order not to tie up any 9-1-1 lines unnecessarily.

Fire/EMS Specific Metrics and Protocols

NFPA 1221 Performance Metrics

- NFPA 1221/7.4.1 Ninety percent of events received on emergency lines shall be answered within 15 seconds, and 95 percent of alarms shall be answered within 20 seconds
- NFPA 1221/7.4.1.1 Compliance with 7.4.1 shall be evaluated monthly using data from the previous month
- NFPA 1221/7.4.3 Emergency alarm processing for the highest prioritization level emergency events listed in 7.4.3.1 through 7.4.3.2 shall be completed within 60 seconds, 90 percent of the time
- NFPA 1221/7.4.3.1 The following types of calls where there is an imminent threat to life shall be included in the highest prioritization level:
 1. Trauma (penetrating chest injury, GSW, etc.)
 2. Neurologic emergencies (stroke, seizure)
 3. Cardia-related events
 4. Unconscious/unresponsive patients
 5. Allergic reactions
 6. Patient not breathing
 7. Choking
 8. Other calls as determined by the Agency Having Jurisdiction (AHJ)
- NFPA 1221/7.4.3.2 The following types of calls where significant property loss/damage is likely or actively occurring shall be included in the highest prioritization level:
 1. Fire involving or potentially extending to a structure (s)
 2. Explosion
 3. Other calls as determined by the AHJ
- NFPA 1221/7.4.3.3 The following types of calls shall be exempted from the requirements of 7.4.3:
 1. Joint responses with law enforcement (involving weapons)
 2. Hazardous materials incidents
 3. Technical rescue
- NFPA 1221/7.4.3.4 The following types of mitigating circumstances shall be exempted from the requirements of 7.4.3:
 1. Language translation

2. TTY/TDD
 3. Incomplete location
 4. SMS message to 9-1-1
 5. Calls received from outside the normal area of responsibility and/or service area
 6. Calls requiring use of a PSAP registry or similar tool to determine the appropriate PSAP and/or transfer location
 7. Calls received during a significant disaster that severely and significantly depletes available resources, impacts local infrastructure, and could result in changes to normal dispatcher procedures (disaster mode)
- NFPA 1221/7.4.15 Standard operating procedures shall include but not be limited to the following:
 1. All standardized procedures the telecommunicator is expected to perform without direct supervision
 2. Implementation plan that meets the requirements of 4.1.6.3, which states “Each jurisdiction shall develop a formal plan to maintain and operate the alternate communications center”
 3. Procedures related to the Comprehensive Emergency Management Plan
 4. Emergency response personnel emergencies
 5. Activation of an emergency distress function
 6. Assignment of incident radio communications plan matrix
 7. Time limit for acknowledgment by units that have been dispatched
 8. Methods for call trace
 9. Methods for caller location determination
 10. Procedures for handling non-voice emergency events
 - NFPA 1221/7.3.1.1 The AHJ shall ensure that there are sufficient telecommunicators available to affect the prompt receipt and processing of alarms and events needed to meet the requirements of Section 7.4, Operating Procedures
 - NFPA 1221/7.3.2 When requested by the incident commander, a telecommunicator shall be dedicated to the incident and relieved of other duties within the communications center
 - NFPA 1221/7.3.3 The AHJ shall establish standard operating procedures to identify the circumstances under which a telecommunicator will be assigned to the incident and how that will be accomplished
 - NFPA 1221/ 7.2.7 Telecommunicators shall be trained in TDD/TTY procedures, with training provided at a minimum of every six months

NFPA 1710 – Fire/EMS Departments

3.3.53 Time

- Alarm Answering Time. The time interval that begins when the alarm is received at the communication center and ends when the alarm is acknowledged at the communication center.
- 3.3.53.2 Alarm Handling Time. The time interval from the receipt of the alarm at the primary PSAP until the beginning of the transmittal of the response information via voice or electronic means to emergency response facilities (ERFs) or the emergency response units (ERUs) in the field.
- 3.3.53.3 Alarm Processing Time. The time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency response facilities (ERFs) and emergency response units (ERUs).
- 3.3.53.4 Alarm Transfer Time. The time interval from the receipt of the emergency alarm at the PSAP until the alarm is first received at the communication center.
- 3.3.53.5* Initiating Action/Intervention Time. The time interval from when a unit arrives on the scene to the initiation of emergency mitigation.
- 3.3.53.6* Total Response Time. The time interval from the receipt of the alarm at the primary PSAP to when the first emergency response unit is initiating action or intervening to control the incident.
- 3.3.53.7 Travel Time. The time interval that begins when a unit is enroute to the emergency incident and ends when the unit arrives at the scene.
- 3.3.53.8 Turnout Time. The time interval that begins when the emergency response facilities (ERFs) and emergency response units (ERUs) notification process begins by either an audible alarm or visual annunciation or both and ends at the beginning point of travel time.
- 3.3.54 Total Response Time. See 3.3.53.6
- 3.3.55 Travel Time. See 3.3.53.7.
- 3.3.56 Turnout Time. See 3.3.53.8

NFPA 1710 - Chapter 4 Organization

- 4.1.2* *The fire department organizational statement shall provide service delivery objectives, including specific time objectives for each major service component [i.e., fire suppression, emergency medical services (EMS), special operations, aircraft rescue and fire-fighting, marine rescue and fire-fighting, and/or wildland fire fighting] and objectives for the percentage of responses that meet the time objectives*
- 4.1.2.1 *The fire department shall establish the following objectives:*

- (1) Alarm handling time to be completed in accordance with 4.1.2.3
- (2) 80 seconds for turnout time for fire and special operations response and 60 seconds turnout time for EMS response
- (3)*240 seconds or less travel time for the arrival of the first arriving engine company at a fire suppression incident and 480 seconds or less travel time for the deployment of an initial full alarm assignment at a fire suppression incident
- (4) 240 seconds or less travel time for the arrival of a unit with first responder with automatic external defibrillator (AED) or higher level capability at an emergency medical incident
- (5) 480 seconds or less travel time for the arrival of an advanced life support (ALS) unit at an emergency medical incident, where this service is provided by the fire department provided a first responder with AED or basic life support (BLS) unit arrived in 240 seconds or less travel time
- 4.1.2.2 The fire department shall document the initiating action/intervention time

4.1.2.3 Alarm Handling

- 4.1.2.3.1 The fire department shall establish a performance objective of having an alarm answering time of not more than 15 seconds for at least 95 percent of the alarms received and not more than 40 seconds for at least 99 percent of the alarms received, as specified by NFPA 1221
- 4.1.2.3.2 When the alarm is received at a public safety answering point (PSAP) and transferred to a secondary answering point or communication center, the agency responsible for the PSAP shall establish a performance objective of having an alarm transfer time of not more than 30 seconds for at least 95 percent of all alarms processed, as specified by NFPA 1221
- 4.1.2.3.3 The fire department shall establish a performance objective of having an alarm processing time of not more than 60 seconds for at least 90 percent of the alarms and not more than 90 seconds for at least 99 percent of the alarms, as specified by NFPA 1221
- 4.1.2.4 The fire department shall establish a performance objective of not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.

4.1.2.5 Evaluations

- 4.1.2.5.1* *The fire department shall evaluate its level of service and deployment delivery and alarm handling time, turnout time, and travel time objectives on an annual basis*
- 4.1.2.5.2* *The evaluations shall be based on emergency incident data relating to level of service, deployment, and the achievement of each time objective in each geographic area within the jurisdiction of the fire department*
- 4.1.2.6 *The fire department shall provide the AHJ with a written report annually*
- 4.1.2.6.1 *The annual report shall define the geographic areas and/or circumstances in which the requirements of this standard are not being met*
- 4.1.2.6.2 *The annual report shall explain the predictable consequences of these deficiencies and address the steps that are necessary to achieve compliance*

Appendix B: NG911 GIS Checklist Example (from GeoComm)

Released by the National 9-1-1 Program in October 2016, the NG9-1-1 Procurement Guidance document provides direction in the areas of contract negotiations, Service Level Agreements (SLAs), and security for agencies procuring Next Generation 9-1-1 (NG9-1-1) products and services.

One aspect of the document explains that as 9-1-1 agencies begin to upgrade outdated systems, it becomes imperative that Geographic Information Systems (GIS) data is Public Safety Grade since it is used in an NG9-1-1 environment to locate emergency callers.

Therefore, as NG9-1-1 implementation and advanced location accuracy capabilities via indoor mapping occurs, GIS data takes on a mission critical role. For 9-1-1 agencies, this means new GIS data management needs, staffing impacts, and GIS data standards and compliance requirements. The GIS data is being used to locate emergency callers, reduce response times, and ultimately help save lives and protect property.

DETERMINE REGIONAL OR STATE NG9-1-1 STATUS FOR YOUR AGENCY

- *Learn about regional and/or state GIS data models to ensure your agency is prepared.*
- *Research and get involved in furthering NG9-1-1 progress.*

PROVIDE EDUCATION TO GIS AND PSAP STAKEHOLDERS

- *Discuss the need for public safety grade GIS with local government partner agencies. GeoComm defines Public Safety Grade GIS as a system designed to capture, store, display, analyze, share, and manage data for the purposes of public safety and 9-1-1 emergency response. Any GIS utilized for the purposes of emergency response is expected to be accurate, secure, reliable, resilient, redundant, and diverse to remain operational in any emergency.*
- *Address the critical role of GIS data in 9-1-1 and NG9-1-1 and the importance of assessing, improving, and maintaining the GIS data to meet industry standards and best practices.*

REVIEW DATA REQUIREMENTS FOR NG9-1-1

- *Ensure you have the required data layers. The five data layers required for an NG9-1-1 system include: Road Centerline, Site/Structure Address Points, Public Safety Answering Point (PSAP) Boundary, Emergency Service Boundary, and Provisioning Boundary.*
- *Consider technological advances and additional data needs for improving location accuracy – such as indoor 2D map development*
- *Review local street names for NG9-1-1 eight-field breakdown.*

- *Determine local data scheme based on National Emergency Number Association (NENA) Standard for NG9-1-1 GIS Data Model. Mandatory attributes are required to be maintained at the local level. The Emergency Service Boundary layer may be maintained as a combined layer but must be provisioned to the NG9-1-1 network as separate layers*

ACHIEVE 98% OR GREATER SYNCHRONIZATION LEVEL BETWEEN THE MSAG, ALI DATABASE, AND GIS DATA

- *Assess, improve, and maintain local GIS data since it replaces the Master Street Address Guide (MSAG) database in an NG9-1-1 system. MSAG, Automatic Location Information (ALI), and GIS data synchronization improves GIS data accuracy and assists in achieving NG9-1-1 requirements while also improving the accuracy of the GIS data on the PSAP map.*

INITIATE AN ANALYSIS OF PSAP AND EMERGENCY SERVICE BOUNDARY LAYERS WITH NEIGHBORING JURISDICTIONS TO ENSURE RESOLUTION OF ANY GAP AND OVERLAPS THAT OCCUR

- *Evaluate the PSAP Boundary layer since it is used by the Emergency Call Routing Function (ECRF) to perform a geographic query and determine which PSAP an emergency call is routed to.*
- *Begin discussions with neighboring jurisdictions for resolution of gaps and overlaps within PSAP and Emergency Service Boundary Layers. Developing intergovernmental agreements may be necessary for issue resolution.*

DEVELOP/DOCUMENT A COMMUNICATION PLAN

- *Establishing a communication plan between local public safety agencies and GIS personnel is critical for ensuring quality GIS data that is complete, accurate, and reliable for 9-1-1 emergency response during any routine or larger-scale emergency.*

DEVELOP/DOCUMENT MAINTENANCE WORKFLOW APPROACH

- *Create standard workflow documentation and store in a location known to designated PSAP and GIS staff to ensure consistency and knowledge transfer when needed.*
- *Develop and document maintenance your workflow approach. With the mission critical nature of GIS data in NG9-1-1, a focus on developing workflows for managing GIS-related errors is necessary.*
- *Establish a discrepancy resolution workflow that follows NENA NG9-1-1 standards.*

DEVELOP A STAFFING APPROACH FOR ADDRESSING REQUIRED NG9-1-1 GIS NEEDS

- *Provide a staffing plan that addresses GIS data needs 24 hours a day, 7 days a week, 365 days a year. Account for discrepancy resolution needs within the staffing approach. Staffing*

plans should consider the workflow for how local GIS data will be provisioned into the NG9-1-1 system.

UTILIZE GIS DATA MANAGEMENT SOLUTIONS THAT ARE BUILT WITH ACCURACY, SECURITY, RELIABILITY, RESILIENCY, REDUNDANCY, DIVERSITY, AND SCALABILITY. DEVELOP/DOCUMENT MAINTENANCE WORKFLOW APPROACH

- *Ensure Public Safety Grade GIS data is used in your PSAP, 9-1-1, CAD, and NG9-1-1 solutions during any routine emergency, natural or man-made disaster.*