CITY OF
HAYWARD
HEART OF THE BAY

City of Hayward Communications Center

Assessment and Strategic Implementation Plan Report

July 25th, 2022

Prepared by:

"Unleashing the Power of Technology"

Federal Engineering®

Federal Engineering, Inc.
10560 Arrowhead Drive, #100
Fairfax, VA 22030
703-359-8200

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Executive Summary

Federal Engineering, Inc. (*FE*) is pleased to provide the City of Hayward with this final report concerning the needs assessment of the Hayward Communications Center (HCC). It builds on the *Current Conditions / Needs Assessment / Initial Findings* Report delivered to the City March 4th, 2022. This project is comprised of three phases; Phase 1 – Operations Assessment; Phase 2 – Recommendations and Strategies to Support Pilot Programs; and Phase 3 – Final Report and Strategic Implementation Plan.

To prepare this report, *FE* followed a data collection process which included the submission of a Request for Information (RFI), a data collection survey tool (survey), and formal stakeholder interviews and focus group meetings. The information and data collected via the survey and the user and stakeholder input, was then analyzed by *FE*'s subject matter experts (SMEs), who applied their collective experience and knowledge of industry best practices and standards towards the development of this Assessment.

The intent of the system observations, analysis, and recommendations sections of this report is not to be an all-inclusive list of everything mentioned or discovered during *FE*'s virtual interviews, focus group meetings, and system component descriptions. The intent is to provide the stakeholders with a high-level overview of the most common or frequently heard comments, concerns, or observations, as well as an actionable list of next steps towards a path forward. An all-inclusive list of deficiencies, enhancements, and applicable recommendations will be included in the new system's functional requirements, the next logical step for the City to take, as the follow-on initiative of this project.

Based on the focus group meetings, individual interviews, observations, review of existing documentation and the survey results, *FE* gained an understanding of the operations, service requirements, workflow processes, training and quality assurance programs, and deficiencies of the City's PSAP.

The findings from this review and interaction served to benchmark the current conditions at the HCC. A description of the analysis and review, supporting narrative and references, and recommendations based on these standards and best practices as well as our experience, formed the content of the Phase 1 (Operations Assessment) report.

The scope of work of this project includes current state, requirements gathering, needs assessment, and recommendations for the HCC, including an evaluation of Hayward Evaluation and Response Teams (HEART) Pilot Program. Based on the focus group meetings, individual interviews, observations, review of existing documentation and the survey results, *FE* gained an understanding of the operations, service requirements,

workflow processes, training and quality assurance programs, and deficiencies of the City's HCC and the progress to date of the HEART pilot program.

The initial findings, subsequent design alternatives and gap analysis conclusions and interaction serve to benchmark each key recommendation. A description of the analysis and review, supporting narrative and references, and recommendations based on these standards and best practices as well as our experience, inform the content of this, the final report.

1. Introduction

1.1 Background

Federal Engineering, Inc (FE) was contracted to provide the City of Hayward (the City) with professional consulting services to conduct a needs assessment and strategic planning effort for the Hayward Communications Center (HCC). The HCC functions as a primary Public Safety Answering Point (PSAP) for the City of Hayward, as well as the unincorporated Fairview area, and provides dispatching services for Police, Fire, Animal Services, and internal calls for service to the City's Public Works and Utilities Department, which includes water distribution and sewer services, and maintenance department.

The Hayward Police Department (HPD) manages the Hayward Communications Center (HCC) and manages approximately 300,000 emergency and non-emergency calls per year. The City's public safety departments operate within a district/beat-based system where emergency response units remain within their pre-designated service area.

Civilian staff is trained in police and fire call-taking and dispatch services. Emergency medical dispatch (EMD) and ambulance dispatching are handled by transferring the call to a secondary PSAP, the Alameda County Regional Emergency Communications Center (ACRECC).

1.2 Methodology

To successfully conduct a comprehensive analysis and operational needs assessment of the Hayward Communications Center (HCC) it is imperative that there is an understanding of the current state related to operations, systems, and infrastructure. The Hayward community is unique, and there must be a thorough understanding of the intricacies of the workflow and relationships between and within agencies to identify opportunities for improvement, develop a future vision for solutions, and guide the City of Hayward through implementation and cutover to new processes, technologies, or systems.

To answer questions driving this evaluation, a mixed-methods approach is required. Part of the methodology involves analyzing the ongoing reporting data captured by the *FE* Data Collection Survey Tool in addition to analyzing the information gleaned from the City of Hayward's 2020 Innovation Workshops. To build interest, ownership, and engagement for the assessment and change vision, stakeholders were approached to participate in on-site interviews to provide qualitative data on current state including organizational structure, process, workflow, challenges, and opportunities for growth. There were

additional remote interviews conducted to develop a thorough understanding of the unique technological and staffing aspects of Hayward, as well as to gain an understanding of the emerging innovative solutions currently in development to meet community health needs. This dual approach is intent on exploring current practices with a goal of enhancing the quality, efficiency, and effectiveness of services to marry system-oriented outcomes and community-oriented outcomes.

This *Assessment and Strategic Implementation Plan Report* is a consolidated document that is structured to focus independently on the following assessment factors:

Our assessment of HCC operations includes, but is not limited to, the following:

- Center operation policies
- Organization charts
- 9-1-1 and non-emergency telephony configuration and deployment
- Mutual aid agreements
- Facilities space and layout
- Scheduling software/practices
- Call-taking and dispatching methodologies
- Workflow/process maps for call-taking and dispatching
- Call processing and workload statistics
- Call volume statistics
- Training requirements and processes
- QA/QI requirements and processes
- Mapping/GIS, voice logging
- Performance metrics
- Use of radio and CAD technology to support Departments and activities
- Range of duties and responsibilities performed by HCC personnel
- Staffing and supervision
- Sufficiency of the facility to support operations
- Current budgets and operations costs
- Operational and reporting requirements
- Department level agreements

The mixed methods approach provided the opportunity for the participating police and fire departments, as well as other agencies and stakeholders to confirm and validate the *FE* statements and descriptions that are the basis and foundation for all subsequent steps of the project.

Specifically, stakeholder representatives included Chief Officers and frontline staff from:

- Hayward Communications Center
- Hayward Police Department
- Hayward Fire Department
- City of Hayward
- Hayward Evaluation and Response Teams (HEART) Pilot Program

FE used interviews and meetings to provide participants with ample opportunity to present their views regarding the feasibility, options, requirements and concerns around existing dispatch Departments and the proposed pilot programs. Our subject matter experts (SMEs) systematically evaluated the feasibility of modifying the City's dispatch methodologies that included:

- Existing challenges and concerns regarding the transfer of medical calls to the Alameda County Regional Emergency Communications Center (ACRECC)

- Changes that could be made to address these concerns, and

- Technologies and requirements needed for the city to effectively support enhanced medical dispatch (EMD) protocol.

To prepare this report, *FE* followed a data collection process which included the submission of a Request for Information (RFI), a data collection survey tool (survey), and formal stakeholder interviews and focus group meetings. The information and data collected via the survey and the user and stakeholder input, was then analyzed by *FE*'s SMEs, who applied their collective experience and knowledge of industry best practices and standards towards the development of this Draft Assessment report.

FE's assessment, and the subsequent development of recommendations resulting from an exhaustive elucidation and review process, becomes the formulation of a long-range strategic plan that meets the vision and objectives of this effort.

2. Initial Findings

It cannot be overstated that throughout our site observations and interviews, our interactions with the City of Hayward team in each department, and at each level, were positive. We found both frontline and leadership alike to be committed to the process, aware that there are issues at play, thus this project, and were forthcoming and professional in their interviews about the current state, the desired future vision and project outcome, as well as the barriers that are currently impeding progress.

It is apparent that from every corner of the organization, staff are dedicated to the mission of serving the community, and really are ready for needed change and improvements in the current environment.

Recurring themes reported throughout our data gathering, observation, and interview process include:

- Primarily, that despite any challenges the Hayward Communication Center (HCC) team are facing, they are exceptional professionals who have a positive work environment and culture among one another and have worked hard to achieve this, after having overcome a toxic workplace in very recent history. This came from staff within the HCC as well as staff in Police, Fire, and City Administration. It was recognized and complimented across the organization.

- Staffing challenges including:

    o Staffing shortages – both frequently and historically within HCC.

    o Increase in call volume and population, as well as expanded Police and Fire response and service/program provision without the increase in HCC staffing to accommodate it.

    o Current staffing vacancies already exist and attrition in 2022 is projecting the loss of three to five full time employees (minimum) through retirement or resignation.

    o Excessive amounts of overtime that staff are required to work frequently to maintain minimum staffing, without a visible end in the near future.

    o Burnout, illness, and absenteeism further creating a cycle of short staffing, overtime, and more burnout, illness, and absenteeism.

    o Mental health and occupational stress impacts from both the functions of the work (exposure to trauma and stress through call volume) and from the working conditions.

- o HCC line level staff belong to a labor union that represents clerical, maintenance, and other City staff, and is not representative of public safety/first responder professionals or conditions.

- Frequent payroll issues for staff in the HCC. Often, time is missed on their pay, paid at the incorrect rate, and there is a delay (weeks) until it is corrected. This has had significant financial impacts on staff and are now required to track their hours separately for their own records in addition to entering them in the payroll system to ensure they are paid correctly.

- Approval for over hiring staff in the HCC was in progress at the time of our site visit in January 2022. Staff were excited and hopeful about this initiative.

- Recruiting challenges including:

  - o Length of time and the process it takes to recruit qualified candidates (12-18 months)

  - o Much lower wages in relation to what neighboring Emergency Communications Centers (ECCs) offer

  - o Lack of a lateral recruiting program where experienced public safety communications professionals can be attracted or hired

  - o Lack of hiring incentives (as compared to neighboring ECC who offer them)

  - o Inability to be competitive considering the challenges noted above

  - o Shortage of Human Resource support, and often without public safety specific expertise, which adds to the length of the process

- Training

  - o Hayward Police Service, although it provides administrative oversight of the HCC, does not provide any training support from its training division. HCC is tasked with managing, creating, and delivering their own training program.

  - o While efforts have been made recently to create a training manual, short staffing often prevents any kind of academy or classroom training for new recruits (or for continuing education of current staff).

  - o New recruits are taught at the workstation amidst (high) active call volume, which is not conducive to good learning in an emergency service, public safety communications environment.

  - o There is no consistent process for training staff.

- o HCC Communications Training Officers (CTOs) are certified through a California POST CTO course. Acting training officers do not have POST certification.

- o Staffing shortages often prevent staff from attending training courses or conferences.

- Project fatigue – HCC staff have participated in previous projects, surveys, provided input on center conditions and challenges, hopeful that it would bring needed solutions, but little has transpired out of it. They are tired and frustrated and running out of optimism, but still committed to this process (current project).

- Change Management and Inclusion in the Change Process

  - o When procedures or policy changes for Police or Fire, HCC is often not included in the early stages of the process, unable to provide insight or input and often playing catch up last minute in real time when the change is implemented, but not having received training on it beforehand.

  - o Fire or Police implement changes to their response, procedure, or programs and there is a gap between when it is implemented and when there is a collective understanding of the change and ability (or capacity) for HCC to fully support them. Often this results in workarounds where HCC involvement is minimized to not impact staff or impede rollout of the Fire or Police related changes.

  - o While changes and pro-active and innovative service is important, HCC needs to be able to have early involvement in the process, and the subsequent capacity and training to manage and support it.

- A concern that HCC will not be able to resolve its current staffing situation and operating challenges in time to support upcoming EMD and Mental Health Response programs and pilot projects.

- A lack of communication (or timely communication) in changes to process or direction or general information that impacts HCC.

- COVID impacts; the pressures, stress, short staffing and additional workload and procedural changes that it brought (and continues to bring).

- A leadership structure and approval process that makes it difficult to effect change quickly or move forward on initiatives.

- A facility/room that the HCC has outgrown – no room for expansion or re-organization in current location.

- No backup center to relocate to, no evacuation or emergency management plan, no contingency or business continuity plan despite Hayward being located on a major fault line (This was mentioned several times during our interviews).

- Openness to and interest in the possibility of implementing Emergency Medical Dispatch and Emergency Fire Dispatch protocol.

3. Organizational Environment

3.1 Hayward Communications Center

The Hayward Communications Center (HCC) is located within Hayward Police Headquarters at 300 W Winton Avenue and serves the entire geographical area of the City of Hayward and the unincorporated area of Fairview within Alameda County. For this report, where City of Hayward is referenced in relation to HCC responsibility, it will include Fairview but may not specifically name Fairview each time. The City of Hayward has an estimated population of 157,532 and encompasses an area of about 65 square miles. The Center's total annual call volume is approximately 211,000 calls. The four-year average total call volume was approximately 215,000 calls.

Management and oversight of the HCC is administered by the Hayward Police Department (HPD). The center serves as the Primary Public Safety Answering Point (PSAP) for the City of Hayward and the unincorporated Fairview area located in Alameda County. HCC is responsible for answering and processing 9-1-1, ten-digit emergency and non-emergency calls for service and provides secondary PSAP and dispatch services for Hayward Police Department (HPD) and Hayward Fire Department (HFD). Further to that, HCC also provides call answer, dispatch, and support for City Departments such as Animal Services and internal calls for service to the City's Public Works, and Utilities Departments.

9-1-1 and 10-digit emergency calls for Emergency Medical Services (EMS) are down streamed to ACRECC, who are responsible for providing Emergency Medical Dispatch (EMD) call-taking and ambulance dispatch within the City of Hayward.

Center staffing is provided by civilian staff who are trained in 9-1-1, Police, and Fire call-taking and dispatch. Typical shift staffing includes one Supervisor, four Communications Officers and one Call-Taker. The staff work twelve hour shifts with shift change daily at 6 AM and 6 PM.

Except for those who are hired for call-taker specific positions, staff are cross trained to perform both call-taker and dispatcher roles. This allows flexibility in the center; staff can rotate roles and provide back up support and coverage for one another throughout their shifts as required.

Ancillary duties listed in the data collection workbook and noted via observation included:

- Answer administrative switchboard calls after hours and on weekends as well as during regular business hours when during periods of limited staffing

- Quality assurance reviews (Supervisor)
- Bi-annual performance reviews (Supervisor)
- Continuous professional training coordination
- Maintain other supplemental information systems
- Requests for 9-1-1 audio and CAD disclosure from the District Attorney (Supervisor)
- Minor troubleshooting for sworn personnel (Supervisor); and
- Coordination of HCC employee scheduling including overtime management, shift, and vacation bidding process (Supervisor)

3.2 Hayward Police Department

The Hayward Police Department provides law enforcement protection for the City of Hayward and is responsible for the operation of the HCC.

In addition to responding to all law enforcement incidents in the city, the Police Department regularly co-responds on many Fire and EMS incidents. For EMS calls, the HCC receives the original 9-1-1 call and dispatch the closest available Fire unit (based CAD recommendations) to EMS. All EMS calls requiring EMD are transferred to ACRECC.

Communications Operators will create a redundant call for service, when warranted, and enter the event into the CAD system once the transfer is complete. Further information on this process will be included in the *Call Flow Description* section below.

Similarly, Hayward HCC processes all 9-1-1 calls for Fire, and is responsible for the subsequent notification and dispatch of Fire Department resources. When Fire requires police response to one of their calls, they advise the HCC by radio. When this occurs, the HCC operator creates a call for service in CAD for HPD.

3.3 Hayward Fire Department

The Hayward Fire Department (HFD) provides fire protection, technical rescue, hazardous materials response, and first responder emergency medical services to the City of Hayward citizens and visitors. HFD operates out of nine separate locations within the city, housing nine engine companies, two truck companies, and two ambulances.

In addition to responding to a multitude of fire and rescue incidents, Hayward Fire Department co-responds to a wide variety of medical calls for aid. Call location,

information, and a run number is provided via mobile data terminals (MDTs) housed in the fire response vehicles.

For Fire calls in Hayward, the HCC receives the original 9-1-1 call. The call-taker will obtain information such as address, the nature of the incident, and other pertinent details to categorize the call type and priority; this includes fires – structure, vehicle, or other, medical assist, or police assist, the call-taker will then accept the call into CAD, dropping the call into the pending screen where the dispatcher can review and dispatch the recommended or appropriate HFD units.

For EMS calls in Hayward, the HCC receives the original 9-1-1 call. When EMS is indicated, the HCC call-taker will first verify and record in the CAD event (call form) the address of the emergency, the primary medical complaint, and the patient's age and sex, and will then transfer the voice call to ACRECC via a "hot button" transfer on the call handling system. HCC call-takers will enter the incident type as a fire call for medical assist and will accept the call, dropping it into the CAD pending screen, where the fire dispatcher can review and send the appropriate HFD units to respond. Once the call is transferred to ACRECC, it is processed using the Medical Priority Dispatch System™ structured Emergency Medical Dispatch (EMD) protocols. Additional detailed information on this process is provided in the *Call Flow Description* section below.

All HFD personnel are cross trained as Firefighters and Advanced Life Support (ALS) Paramedics and as part of the Department's service provision, respond to all medical calls for service to provide patient care until medical transport arrives. This is especially beneficial in the case of a delayed response from Alameda County's provider of ambulance service (Falck Alameda County), and delayed response or long wait time for EMS arrival on scene is a common occurrence in Hayward. In fact, at the time of our site visit in January 2022, it was reported that Falck Ambulance was out of compliance with their service provision contract, particularly when it came to response time.

Although there are frequent calls for co-response to EMS incidents, there is no electronic means or CAD to CAD interface to share call information between HCC and ACRECC. Any further updates are provided by calling one another over the telephone.

Hayward Fire and Police respond together on a regular basis. When Police require Fire response, HCC alerts the acting on-duty fire chief via radio, as well as electronically through the MDTs. There is a CAD to MDT interface that allows the sharing of information, as well as a radio talk group (channel) that Police and Fire communications share. When Police or Fire request an assist, CAD is used to copy the event for the required responder.

Each agency has their own unique event type codes as the district (Police and Fire boundaries) are not the same.

HFD also houses the 'Firehouse Clinic,' a full-service primary and preventative care center that is located on the grounds of Fire Station #7 in South Hayward. The clinic is designed to provide an alternative to community clinics that have long wait times and costly (often preventable) emergency room visits. It provides residents with accessible and affordable health care regardless of coverage. The collaborative model works to increase communication, data sharing and coordinated services between EMS and primary care to direct patients to appropriate settings/levels of care.

3.4 Organizational Analysis

3.4.1 Observations

The HCC has outgrown its organizational model. The staffing, leadership, governance, operational, facility and support model in its current state are not sustainable. Hayward Communications Center is at a critical state; it needs a significant upgrade to move forward successfully. The recruiting process is exceptionally lengthy, the wages and incentives to attract and retain qualified and experienced candidates do not exist, the recruit training program has been difficult to implement in a classroom setting because of the lack of staff or an assigned Administration Supervisor to oversee the training and Quality Assurance program. This is compounded by the fact that without a call-taking protocol, or a training program led by certified training staff, it is difficult to train new employees with the consistency or the necessary support required to be fluent and confident in call-taking early in the process. This results in washout and turnover of new employees, where many recruits do not finish the training process and leave before they are even assigned as team strength on a shift.

Understand, it is not for lack of effort on the part of the HCC Supervisors or Communications Operators; they are doing the best they can with the capacity and resources they have. In fact, it is because of the dedication and commitment of the HCC staff that it is able to remain in operation at the level it does. However, the lack of staff, support, and adequate time off combined with incessant overtime, is taking its toll on staff. Burnout, illness and injury, and turnover are occurring and will continue to until urgent issues are addressed.

Since its inception, the HCC has lived within the Hayward Police Department portfolio. While the City of Hayward has grown in population, so too has call volume, Police and Fire service delivery, and expectations of 9-1-1 and Public Safety from the public.

However, the staffing levels, and operational and organizational model have not grown to support these increases in workload and call volume within the center.

The governance and leadership model are no longer serving the dynamic and demanding needs of a 21st century Emergency Communications Center. The HCC executive leadership is currently assigned to the Police Support Services Manager's portfolio. There are many units within the service that this manager is responsible for, and the span of control is stretched thin. This, combined with a Communications Center Administrator who has not been assigned the authority to make operational decisions, means that initiatives, decisions, and progress get bottlenecked and impact the HCC further.

The HCC serves both the Hayward Police and Fire Departments. However, because the center is located in Police HQ and is managed and receives its budget from Police, the historical perception is that this is an HCC that serves primarily Police, to the detriment of service delivery to Hayward Fire Department. While the present Chiefs in each respective Department are working collaboratively to ensure both agencies' needs are met, the reality is, the HCC has grown in size, service delivery, and support requirements, to the extent that it will not function optimally if it remains under the direction of another agency. Further, while the current Chiefs are working collaboratively today, there is no guarantee that their successors will lead in this fashion in the future. The timing, and the leadership team to support it, is the right fit to transition the HCC to an independent City Department.

The measures identified in *Section 4 High-Level Strategic Implementation Plan* of this report must be taken immediately to address current issues in order to steward the HCC out of its current serious risk environment. The timing of this study is occurring at a vital point for HCC; staffing levels are at critical deficiency and must be addressed immediately to continue sustainable operations. Further, while staffing is the most critical matter at present, there are other areas of focus in HCC that also require immediate attention and are interconnected to the staffing crisis it is experiencing.

3.4.2 Governance

Governance refers to establishing a shared vision and a collaborative decision-making process supporting interoperability efforts to improve communication, coordination, and cooperation across jurisdictions.

Developing an appropriate governance structure for an independent HCC that supports multiple departments (or jurisdictions) is a critical component to enabling leader(s) to effectively manage center resources and provide the best possible service to all user agencies and the community. The development of a governance structure can often be

impacted by political and user agency control issues. Therefore, it is important to realize when collaborating on shared services and/or combining services into an independent HCC, that the communications center(s) leader(s) will need to utilize center resources to best balance the needs of all user agencies as opposed to a single agency. While this balance can be easily achieved, the governance structure can positively or negatively impact the ability of the center management to maintain the balance long term.

Governance considerations will need to include a review process, lessons learned, scheduled system health checks, clear resource needs for support staff number, roles, training, and funding. Other considerations to include in governance planning is defining the structure of the system, how it will be maintained and by whom, and how to gain support from secondary agencies. The shared goal among the City, Police, and Fire is that the HCC be agency independent but cooperatively supported by all parties.

3.4.3 Recommendations

- That City of Hayward begin implementing the High-Level Strategic Implementation Plan as described in *Section 4* of this report.

- That the City of Hayward and HCC work towards creating an independent Emergency Communications Center; a City Department with its own leadership, governance, and support model.

- That HCC management have Emergency Communications Center experience, training, and education to support the dynamic and specific needs of public safety communications agencies and their teams.

- That the Communications Center Administrator be provided the authority and autonomy to make operational decisions for the HCC.

4. High-Level Strategic Implementation Plan

While the most critical factor that must be addressed immediately within HCC is staffing, there are other areas of focus in the HCC that will also need to be managed in parallel. A detailed outline of our findings and recommendations can be found at the end of each section in the report.

In this section, we offer a high-level strategic implementation plan; a roadmap that identifies and prioritizes the next best steps for HCC and its leadership. We have created the strategic implementation plan below which includes area of focus, criticality/priority, followed by a recommended plan of action. Additionally, it was requested that *FE* indicate which portions of the project they could assist with; we have added a column to indicate such.

FE recommends that Hayward organize a project task force team immediately to carry out the strategic plan below. Without dedicated resources and concerted effort, it will not be possible to move forward with the urgency required to address the immediate critical needs.

Table 1 – Strategic Implementation Plan

Area of Focus	Priority	Plan of Action	Can *FE* assist?
Staffing	#1 - Critical	**Immediately:** • **Increase Overall Staffing:** A total number of 53 HCC employees with no turnover factored in, and 62 HCC employees with turnover factored in, is necessary to achieve sustainable operations and meet industry performance standards. Today, HCC is authorized for 33 employees, and 31 of these positions are filled. An overall increase of 20 – 29 employees is required. • **Establish Minimum and Optimum Staffing Levels:** A minimum staffing complement of eight employees on duty, and a maximum staffing complement of ten employees on duty per shift in the HCC. • Work toward implementing staffing recommendations without delay. • Consider secondment of staff from Police and Fire first, other City departments second, to bridge staffing gaps until critical staffing levels are addressed. These would be temporary reassignments in HCC as Communications	Yes

Area of Focus	Priority	Plan of Action	Can *FE* assist?
		Officers, with an approximate 12–18-month assignment. • Reduce or remove non-essential workload: Immediately consider transitioning any value-add work for non-emergency departments to another 24/7 group of City employees (or contract out externally), until the center is at full staffing. This includes animal control, public works, etc. This will assist with reducing the workload on a team that is already stretched thin for resources. As there are no specific POST requirements for this workload, other City staff can be onboarded and trained to provide this work, without much complication. • Consider other alternative plans to bridge staffing gaps and workload until HCC staffing increases are achieved. **Recruiting Process:** • Recruiting process must be accelerated by assigning dedicated human resource, leadership, and HCC staff to direct and prioritize HCC recruitment. • Shorten process for entry level applicants – explore fast track recruiting for call-taking, Fire/EMS Dispatch without POST requirements. • Recruiting process improvements to include lateral positions – an incentivized program for attracting qualified candidates. Review of wages, incentives, etc. will be necessary to ensure competitiveness in the market. Compare to current practice for Hayward Fire and Police, and other ECCs in the area. • To achieve staffing requirements in a timely and successful manner, both lateral experienced candidates, along with entry level must be recruited. Every effort should be made to attract candidates who are already experienced and qualified to work in an ECC.	
Training	**#1**	• Fill Administrative Supervisor role immediately. This will provide the structure and oversight necessary for training, QA/QI, change management through all the pieces of this multifaceted project/organizational upgrade. • Implement a full academy/classroom training program for new recruits.	Yes

Area of Focus	Priority	Plan of Action	Can *FE* assist?
		• Adequate training and support of new recruits and current staff will go a long way in promoting retention in the center, assisting with the mitigation of the staffing crisis.	
	#2	• Implement continuing education & professional development program for all staff. • Implement a full QA/QI program, along with a Coordinator position assigned to deliver the program.	Yes
Call Processing Protocol Implementation:	#1	• Conduct a workshop for stakeholders to align goals and determine how to utilize current data systems to aggregate the data needed to report on HEART program success. • Procure and implement a structured, commercial call-taking and dispatch protocol for Police, Fire, Medical calls. This will streamline and accelerate training, provide consistency and standards, reduce risk & cost, and improve performance. • Immediate results are recruits who can be trained and are ready to work quicker, who feel prepared & confident to take on the role and will complete the training period and remain as employees. • Commercial protocol programs train your employees – no need to do that portion in house. Reduces the training workload. • Medium and long-term results are standardization and consistency that is measurable through QA/QI processes, which also improves training, performance, and reduces risk & cost. • Additionally, this prepares staff for an integrated behavioral health call-taking and dispatch protocol/risk assessment process considering all aspects of the care continuum.	Yes
	#2	• Implement full medical call-taking in HCC once staffing capacity begins to increase – *the work to procure medical protocol should be in the #1 priority category. By the time it is ready for implementation, staffing levels may already be at a level that can support it.	Yes
Organizational Model	#1	• HCC organizational changes are necessary – it has outgrown its current model. • Provide Authority to Communications Center Administrator to make operational decisions.	Yes

Area of Focus	Priority	Plan of Action	Can *FE* assist?
		• Move HCC management out of Support Services Manager portfolio and onto its own. • Require HCC management to have specific Public Safety Communications experience, education, and training.	
	#2	• Work towards an independent Communications Center with its own leadership and support model. It will not live under Police or Fire but will report to a governance board/model where police and fire have equal representation; one agency is not perceived as a client of the other. • Create a governance model where equal representation of Public Safety agencies exists, and additional internal and external stakeholders are included. Ensure the model is sustainable for long term success and provides HCC management the autonomy, authority and support necessary to lead the center effectively.	Yes
Technology	#1	• Work toward accelerated implementation of call-taking and dispatch software and programs. • Design and implement a two-way CAD to CAD interface between HCC and ACRECC for medical call information. • Review and revise incident types/CAD codes for Behavioral Health Project (as part of data mining and reporting, and risk assessment/protocol creation).	Yes
	#2	• Explore major case management software for HEART that enables data entry from all units/agencies and can provide statistical dashboard of outcomes.	Yes
Facility (Primary & Backup Facility)	#1	A new facility for HCC is required; however, that will take significant time to plan for and complete. In the interim, immediate needs to be met are: • A redesign/reconfiguration of current set up in the HCC is necessary to add more workstations for additional staffing positions. • A back up facility is necessary as soon as possible. • A training room with workstations and HCC technology – CAD, phone, radio, is necessary for recruit training/classroom academy training. • A private room for Supervisors for 'one-on-one' meetings or coaching conversations.	Yes

Area of Focus	Priority	Plan of Action	Can *FE* assist?
	#2	• A purpose built (or renovated) Emergency Communications Center that serves the unique needs of Public Safety Communications people and technology. It should be designed to suit current needs and into the next 20-30 years.	Yes

5. Establishment

5.1 Staffing

Optimal staffing in the HCC includes one Supervisor or Acting Supervisor who oversees the daily operation and provides supervision, five Communications Operators, and two Call-Takers per team. Staff are hired either as a Communications Operator (Call-Taker and Dispatch trained) or as a Call-Taker. There is a $6 pay difference between the two position classifications.

Overall staffing includes one Communications Administrator who oversees HCC operations, five Communications Supervisors – four who work in frontline supervisor roles, and one who fulfills a special assignment (2 years in length) as an Administrative Supervisor, nineteen Communications Operators (combined Call-Taker/Dispatcher), and eight Call-Takers. Additionally, there are three part time dispatchers and one part-time call-taker currently in the hiring process. Staffing in the Communications Center is also augmented by other city employees who are trained in varying levels of Police Communications positions and assist occasionally when their schedule allows.

Minimum staffing 24/7/365 is one Shift Supervisor, four Communications Operators and one Call-Taker. The Communications Administrator typically works the day shift, Monday through Friday. The staff work twelve hour shifts with shift change daily at 6 AM and 6 PM. The schedule is set up, so staff work Monday/Tuesday/Wednesday or Thursday/Friday/Saturday, and every second Sunday is a short shift to time balance. Every three months the working days are switched to have weekends off. Every six months staff bid on nightshifts or dayshifts based on seniority.

At present there are two vacant positions in the HCC; a supervisor position (which would fill the Admin Supervisor role), and a Call-Taker position. Additionally, a recent staffing study has not been conducted in HCC to determine if the staffing model is sufficient to support current workload and call volume in the center. The last staffing study was completed in 2013; at that time call-taker positions as well as a fifth communications supervisor were added, but no other recommendations to augment staffing levels were implemented.

Further to the above noted vacancies and staffing study issues, attrition in 2022 will compound staffing challenges and further impact staffing capacity. The HCC is projected to lose up to five full time employees so far this year through retirement or known upcoming resignations.

The following table depicts the optimal HCC staffing levels:

Table 2 – Optimal Staffing

Optimal Staffing - Hayward			
Supervisors	Call-Takers	Communication Officers	Total
1	2	5	8

The following table depicts the minimum HCC staffing levels:

Table 3 – Minimum Staffing

Typical Staffing - Hayward			
Supervisors	Call-Takers	Communication Officers	Total
1	1	4	6

The following table depicts all the employees assigned to the HCC:

Table 4 – HCC Employees

Hayward HCC Employees		
PSAP	Authorized Employees - Full Time	Actual Employees - Full Time
Communications Administrator	1	1
Administrative Supervisor	1	0
Supervisors	4	4
Communications Operators	19	19
Call-Takers	8	7
Total	33	31

5.2 Salary Ranges

The following tables depict the current salary ranges for the HCC employees.

Table 5 – HCC Current Salary Ranges

Current Salary Ranges			
Position	Low - Annual	High - Annual	Average
Communications Administrator	$110,076.00	$133,764.84	$121,920.42
Shift Supervisors	$91,764.00	$111,984.00	$101,874.00
Call-Takers	$66,492.00	$80,784.00	$73,638.00
Communications Operators	$78,684.00	$97,236.00	$87,960.00

5.3 Supervision

The HCC is overseen by the Support Services Division Manager who also manages the departmental budget analyst, Information Technology, Animal Services, Crime Scene Technicians, Jail Operations, Property and Evidence Unit, and Records Bureau and reports directly to the Chief of Police. An Administrative Assistant supports this position.

The Communications Center Administrator conducts the overall management of the Communications Unit.

There is direct supervision 24/7 in the HCC provided by a Shift Supervisor who reports to the Communications Center Administrator. Minimum staffing requires a supervisor be assigned to each shift. The Supervisor occupies the supervisory specific workstation, located in the middle of the room between the call-taker and dispatcher workstations. Supervisors have full access to CAD, a radio console, the Verint logger recorder, and fully functioning call handling system capable of answering 9-1-1, emergency, and non-emergency lines. Supervisors do not form part of the call-taking or dispatch complement; however, they frequently are required to assist with emergency and non-emergency calls, as necessary. This is problematic, as it takes away the ability to supervise and assist staff as required.

Throughout their shift they are responsible for staff supervision and support, monitoring call volume and calls in pending, scheduling breaks each shift and ensuring current shift and upcoming shifts are adequately staffed, as well as arranging for part time staff or overtime support to fill in, as necessary. They are active supervisors, listening for requests for assistance from the team on duty – there is no call light, intercom, or other means of easily requesting supervisor support; team members call out to the supervisor when required.

Supervisors are responsible for addressing pending priority 3 and 4 calls to ensure follow up with the callers is completed, watching for potential expired and overdue calls, and updating and reassigning, as necessary.

There are many administrative tasks they perform on shift as part of their duties including, but not limited to the following:

- Tow tag processing for secure tows (manual paper process),
- Maintain the personnel scheduling binder,
- Oversee staffing, overtime, and payroll paperwork (manual paper process),
- Completing call information and audio requests from the District Attorney's office, or officers for files or for court purposes,
- Quality assurance reviews for staff,
- Bi-annual performance reviews, and
- Plan, deliver and track training sessions for teams as required.

Supervisors are awarded promotions based on seniority as well as the participation in a competitive testing process. The most suitable candidates are selected for promotion, and receive training through POST, as well as other in house and external programs.

5.4 Recruiting Process

The recruiting process for HCC Communications Operators and Call-Takers is administered by City of Hayward Human Resources (HR) Department. Recruiting is a lengthy process, taking between 12 – 18 months from the time of a position posting until the candidate is onboarded for their first day of work. HCC candidates are required to go through the same recruiting and detailed security clearance process as sworn police officers.

Requirements to fulfil a Communications Operator or Call-Taker position include high school diploma; minimum typing proficiency; passing California Commission on Peace Officer Standards and Training (POST) Public Safety Dispatcher Candidate Selection Standards criteria and testing; and passing City of Hayward candidate selection policy. POST standards and Hayward City policy include a written examination, interview, background investigation – which includes a polygraph, medical examination, and psychological evaluation. The process used to also include a Crit[call™ testing process – a public safety communications specific testing tool but was discontinued some time ago for reasons unknown as shared during our interviews.

The testing is conducted by a combination of in-house administration and HR staff, and various outsourced contracted staff for polygraph, medical, and psychological assessments.

Recruiting advertising includes posting internally and externally for the respective position(s), candidates are vetted by HR for minimum qualifications and relevant training, education, and experience. Personnel and Training (P&T) coordinates the written test and interview. Successful candidates are selected to move forward for background and polygraph investigation, medical, and psychological assessments. It is during this phase where the process can be delayed significantly. Coordinating schedules and availability with internal stakeholders in HR and Police, along with external contractors to provide assessments, and aligning the process to ensure efficiency, can prove difficult and becomes prolonged quickly. In addition, Police do not have dedicated HR resources; City HR is also supporting many other departments in the remainder of the organization, with a limited number of members on their team to deliver services. Police did implement a dedicated HR specialist in the department recently, but their tenure was a short few months before they moved on and the position has been vacant since.

5.5 System Furniture

There are nine system furniture positions installed in the communications center. Seven of the nine positions have CAD, 9-1-1 answering equipment, and radio dispatch consoles. The other two positions have CAD and 9-1-1 answering equipment, but no radio dispatch consoles. These positions are used for call-taker only duties.

Table 6 – System Furniture Positions

HCC				
Positions	**Manufacturer**	**Installed**	**Sit to Stand**	**Environmentals**
9	Xybix	2018	Yes	No

Table 7 – System Furniture Technology

HCC			
Total	**9-1-1 Answering**	**CAD**	**Radio Dispatch**
9	9	9	7

5.6 Ancillary Duties

Ancillary duties the communications staff provided in the data collection workbook and noted via on-site observation included:

- Answer administrative switchboard calls after hours and on weekends as well as during regular business hours when during periods of limited staffing
- Quality assurance reviews (Supervisor)
- Bi-annual performance reviews (Supervisor)
- Training
- Maintain other supplemental information systems
- Requests for 9-1-1 audio and CAD disclosure from the District Attorney (Supervisor)
- Minor troubleshooting for sworn personnel (Supervisor)
- Scheduling and overtime management (Supervisor)

6. Staffing & Workload Analysis

To provide efficient service to the public and local emergency services, ECCs must always maintain an adequate number of qualified staff on duty. When this does not occur, service quality can diminish and the short and long-term effects on employees often lead to staffing shortages, overworked personnel, increased attrition, increased complaints from citizens and response agencies, and a reduced level of confidence in the HCC's operations.

The staffing needs of a 24/7 public safety communication operation require constant monitoring of the workload and staffing assignments to maximize coverage across all shifts. It is rare that a set number of staff is on duty at any given time. The work hours and assigned positions per shift are based on need, skill sets, experience, and call volume. HCC management and supervisory staff are responsible for monitoring these factors and assigning staff as such.

6.1 Standards and Best Practices

Key public safety industry organizations recognize that the on-going evolution of 9-1-1 requires establishing minimum standards for ECC employee training, operations, technology, and facilities.

These organizations include:

- International City/County Management Association (ICMA)
- National Emergency Number Association (NENA)
- Association of Public-Safety Communications Officials – International (APCO)
- International Association of Fire Chiefs (IAFC)
- Commission on Accreditation for Law Enforcement Agencies (CALEA)
- National Fire Protection Association (NFPA)

The specific standards applicable to City of Hayward include the following service quality and performance goals in call-taking:

NENA-STA-020.1-2020, 9-1-1 Call Answering Standard, states, "90% of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP):

- SHALL be answered within (≤) 15 seconds. Ninety-five percent of all 9-1-1 calls SHOULD be answered within (≤) 20 seconds."

- The interval between Call Arrival and Call Answer should be evaluated, at a minimum, for each preceding month using a full month of data. Determining if a PSAP has successfully met the call interval metric of 90% in 15 seconds (and 95% in 20 seconds), should be based upon the one-month evaluation. An authority having jurisdiction (AHJ) may measure this metric on a weekly or daily basis for a more detailed analysis.

- "Ninety percent of all 9-1-1 calls arriving at the Public Safety Answering Point (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 00-001). Ninety-five percent of all 9-1-1 calls should be answered within 20 seconds."

The call processing requirements section in NFPA 1225 (2022) states:

- Section 15.4.1 - "Ninety percent of events received on emergency lines shall be answered within 15 seconds, and 95 percent of events shall be answered within 20 seconds.

- Section 15.4.1.1 - "Compliance with 15.4.1 shall be evaluated monthly using data from the previous month."

- Section 15.4.4 - "Emergency event processing for the highest prioritization level emergency events listed in 15.4.4.1 through 15.4.4.2 shall be completed within 60 seconds, 90 percent of the time."

6.2 Call-Taking

Call volume is the prime factor in determining the number of trunks, workstations and call-taking positions needed to manage a PSAP's projected call-taking workload. Of equal importance in determining the number of staff, is the standards by which an agency complies with in call answering. The NENA[1] and NFPA[2] standards, used by the Insurance Services Office (ISO), is to answer 90% of all 9-1-1 calls within 15 seconds and 95% answered within 20 seconds.

The first step in determining staffing levels is to estimate the total telephone call volume the PSAP will handle, including 9-1-1, ten-digit emergency, and non-emergency phone calls. To determine these statistics, *FE* used the reported 2021 total call volumes

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[1] NENA-STA-020.1-2020, 2.2.3 and 2.2.4
[2] NFPA 1221, 7.4.1

submitted by the City which included incoming 9-1-1 calls, ten-digit emergency and non-emergency phone calls, and outgoing phone calls.

The combined 9-1-1 call volume for the City for 2021 was 65,598, the combined average ten-digit emergency and non-emergency call volume was 136,291 and the total outgoing calls were 80,584. The total average call volume, including all 9-1-1, ten-digit phone calls, and outgoing calls for the City for 2021 was 287,099.

Table 8 – All Telephone Calls

Phone Statistics					
Hayward HCC	**2018**	**2019**	**2020**	**2021**	**Average**
9-1-1 Calls	68,380	72,028	67,871	65,292	68,393
Total Non-Emergency	145,322	147,014	142,595	140,917	143,962
Text to 9-1-1 Calls	220	248	279	306	263
Outgoing Calls	88,778	90,457	82,563	80,584	85,596
Total	**302,700**	**309,747**	**293,308**	**287,099**	**298,214**

The next step is calculating the number of call-taker positions requiring 24/7 staff in order to manage the total call volume for the HCC. The Hourly Call Volume Distribution and Call-taker Count table reflects the monthly and per-hour estimated call volume determined by the busiest month from the 2021 annual statistics by hour supplied to *FE.* The City provided hourly call volumes for 2021 and that data was used to determine the combined busy hour estimates. The busiest month was determined to be the month of October, which had a total of 25,715 phone calls. The slowest month was February with a total of 20,675 phone calls.

Table 9 – Phone Calls by Month

HCC	
2021 Phone Calls	
January	21,898
February	20,675
March	23,557
April	22,570
May	24,091
June	24,784
July	25,545
August	25,469

HCC	
2021 Phone Calls	
September	24,955
October	25,715
November	23,203
December	24,637
Total	**287,099**

The following Hourly Call Volume Distribution and Call-taker Count table also highlights the slowest and busiest hours in a 24-hour period in an hourly table. *FE* arrived at the number of call-taker positions listed in the hourly table by using an Erlang C calculator. The Erlang C calculator is a traffic model tool developed in the 1970s by telephone companies to project the number of operators needed to manage specified call volume. This tool is the foundation of the current 9-1-1 industry staffing standards and tools available through APCO and NENA. The calculator is enhanced by 9-1-1 industry and individual PSAP data to form a methodology that projects how many full-time equivalent (FTE) staff are needed to process calls. Note that only call-taking positions and number of call-takers are all that these staffing tools can accurately project.

The Erlang C calculations performed by *FE* allows the call-taking performance standards desired to be entered, in order to arrive at the correct number of physical call-taking workstations that need to be staffed, by hour of the day, to meet those standards. Calculations do not allow two separate service level objectives for emergency and non-emergency calls, therefore the more stringent NENA standard of 90% within fifteen seconds or less is used for both 9-1-1 and ten-digit incoming calls as part of the combined call load.

The call-taker performance standards used in these calculations is 116 seconds of call time, as provided by the City. Wrap up time is the time needed after the call has ended to finish a CAD incident with notes and narrative and then to prepare for the next call. For this report *FE* used the current industry best practice of 45 seconds for wrap up time.

The slowest hour of the day is estimated to be at 4:00 a.m., and the busiest hour of the day is 12:00 p.m. The table below highlights these periods. This table provides upper and lower call volume from which staffing projections can be estimated. When looking at scheduling on a more granular level, determining the busiest and slowest days of the week, along with hour of those days, allows HCC management to schedule staffing for shifts more efficiently, and based on actual workload.

The following best practice and current PSAP call performance standards are the metrics used to align the calculations with the HCC workload:

- Service level objective of 90% calls answered within 15 seconds or less
- Average talk time of 116 seconds
- Average after-call wrap up time of 45 seconds

Table 10 – Hourly Call Volume Distribution and Call-Taker Count

HCC			
Hour	Average	Calls Per Hour	Call Takers Needed
0:00	2.82%	23.4	3
1:00	2.47%	20.5	3
2:00	2.38%	19.7	3
3:00	1.95%	16.2	3
4:00	1.85%	15.3	3
5:00	1.92%	15.9	3
6:00	2.42%	20.1	3
7:00	3.45%	28.6	4
8:00	4.64%	38.5	4
9:00	5.08%	42.2	5
10:00	5.50%	45.6	5
11:00	5.44%	45.2	5
12:00	5.93%	49.2	5
13:00	5.43%	45.0	5
14:00	5.83%	48.3	5
15:00	5.86%	48.6	5
16:00	5.38%	44.6	5
17:00	5.34%	44.3	5
18:00	5.44%	45.1	5
19:00	4.85%	40.2	5
20:00	4.43%	36.7	4
21:00	4.18%	34.7	4
22:00	3.98%	33.0	4
23:00	3.45%	28.6	4
TOTAL	100.00%	829.5	4.17

6.3 Dispatching

The next step in estimating staffing is determining the number of dispatch positions requiring 24/7 staff. Currently, there is not a nationally recognized calculation/formula to determine the number of dispatchers needed based on workload. However, if congestion is an issue, radio traffic/usage studies can be conducted to determine the level of use or available airtime of a radio talk group or channel to ensure they are not too busy. This type of study can assist an ECC in determining the number of talk groups or channels needed to support operations but does not directly provide the number of dispatchers needed to staff the required channels.

While there is no scientific method to calculate the number of needed dispatch positions based on the number of incidents or CAD events, *FE* uses a combination of reported CAD events and number of primary dispatch channels currently in use. This information is collected and reviewed along with the other types of criteria listed below when estimating dispatch workstation numbers. The following CAD Events table shows the number of events for 2018 through 2021, as well as the averages and totals.

Table 11 – CAD Events

CAD Events					
Agency Type	2018	2019	2020	2021	Average
# of Law Enforcement Incidents	108,752	94,813	114,333	101,318	104,804
# of Fire Incidents	17,929	19,447	18,379	17,173	18,232
# of EMS Incidents	14,893	16,056	14,652	13,103	14,676
Total	141,574	130,316	147,364	131,594	137,712

To maximize the efficiencies gained by combining the dispatch of various districts, each existing dispatch position should be reviewed to see if combining some of the units on to the same primary dispatch channel makes sense. If a single primary dispatch channel is not feasible, then reducing the number of primary dispatch channels to the lowest number possible, without affecting operations, is always the goal.

It is not a recommended best practice to assign additional tasks to primary dispatchers other than dispatching events. Dispatchers must be available and ready as soon as a new event arrives in CAD, or when a field unit has a radio message for the dispatcher. This is accomplished by thoroughly reviewing and taking into consideration the following:

- Assignment of multiple primary dispatch talkgroups – It is a recommended best practice that multiple primary dispatch talkgroups not be assigned to a single

dispatcher. A single dispatcher should not be expected to manage more than one emergency event on one channel/talkgroup.

- The use of current technology – Technology such as mobile data and Automatic Vehicle Location (AVL) should be used to the greatest extent possible to help reduce radio traffic. The exception is for officer location during a dispatch or officer-initiated event or action because the safety of the officer(s) may be negatively impacted.

- Tactical or operational talkgroups and channels – The use of tactical or operational talkgroups and channels is common in fire and law enforcement communications to effectively manage event communications, operations, and incident management. A dispatcher should be assigned to monitor and support field personnel during significant events that require active structure related events, multi-unit incidents, and special or high traffic special operations.

The following Dedicated Dispatch Positions table illustrates the number and type of existing dedicated dispatch positions operational assignments needed. A dedicated dispatch position requires an employee to be assigned 24/7/365.

Table 12 – Dedicated Dispatch Positions

Primary Dispatch Positions - HCC				
#	Position Type	9-1-1 CPE	CAD	Radio Dispatch Console
1	PD Comm 1	Yes	Yes	Yes
2	PD Comm 3	Yes	Yes	Yes
3	FD Dispatch	Yes	Yes	Yes
4	FD Command	Yes	Yes	Yes

It is *FE*'s recommendation that all positions be equipped with the same critical technology for CAD, 9-1-1 answering equipment and radio dispatch consoles. This allows any ECC function, call-taking, or dispatching, to be conducted at any position in the center. This allows decision makers to easily change operational assignments as needed.

The ultimate goal should be that all staff are cross trained for all job functions eventually, whenever possible. While daily job function assignments would change for employees, any employee could be utilized at any position for call-taking or dispatch. This methodology ensures a higher level of efficiency and lower overtime costs. The ability to cross train all staff is a benefit of an ECC this size. As PSAPs grow and become more

complex there is a need to split job functions by specialty; dispatcher and call-taker in a horizontal call model. While this structure works well, it does add a layer of complexity to scheduling and training. However, cross trained employees ease the complexity when looking for staff to fill shifts and for Supervisors who need to re-configure the operations floor and/or staff additional positions based on a fluctuating workload.

However, we recognize that in the current staffing shortage that HCC is facing, it may be necessary to augment or pause cross training in order to accelerate onboarding and training of staff. Ideally, entry level recruits would fill call-taker positions initially, while lateral recruits with existing HCC training and experience could fill dispatcher positions upon hire.

6.4 Supervision

The NFPA 1225 (2022), Annex A.15.3.1.1 states "Telecommunicator staffing is an important issue in achieving prompt receipt and processing of events. Consider the following two concepts of communications center operations:

1. **Vertical Center:** A telecommunicator performs both the call-taking and dispatching functions.

2. **Horizontal Center:** Different telecommunicators perform the call-taking and dispatch functions.

Telecommunicators working in a vertical center are known to engage in multitasking that can inhibit their ability to perform assigned job functions. Routine evaluation of telecommunicator staffing, number of inbound emergency and nonemergency calls, and other operational statistics are necessary to allow a prompt receipt and processing of events."

Public safety best practices require 24/7 supervision. NFPA has developed codes, standards, and recommended practices through a process approved by the American National Standards Institute (ANSI). The Technical Committee on Public Emergency Service Communication prepared the latest edition of NFPA 1225, *Standard for Emergency Services Communications Systems (2022 Edition).* Chapter 15 sets forth the standards for ECC operations: Section 1 of Chapter 15 addresses management:

- NFPA 1225 (2022) 15.3.4 states: "Supervision shall be provided when more than two telecommunicators are on duty."

- NFPA 1225 (2022) 15.3.4.1 states: "Supervision shall be provided by personnel located within the communications center who are familiar with the operations and procedures of the communications center."

- Annex A of NFPA 1225 (2022) provides further explanation. A.15.3.4 states: "The supervisor position(s) in the communications center are provided in addition to the telecommunicators positions. Although supervisory personnel are intended to be available for problem solving, the supervisor position is permitted to be a working position."

The *Standards for Public Safety Communications Agencies* (SPSCA), established jointly by Commission on Accreditation for Law Enforcement Agencies (CALEA) and APCO, does not specifically address staffing or supervision in an ECC. However, both sets of standards reference utilizing Incident Command System (ICS) protocols. It should be noted that CALEA Standard 46.1.2 and SPSCA Standard 7.1.2 are mandatory for CALEA accreditation.

The Department of Homeland Security, coordinating with federal, state, and local governments established the National Incident Management System (NIMS). ICS falls under the Command and Management element of NIMS. ICS represents best practices and is the standard for emergency management across the country. ICS requires a supervisor when there are between three and seven persons performing similar functions (the optimal span of control is five). A manageable span of control allows supervisors to supervise and control their subordinates, while allowing for efficient communications between all parties.

While NFPA standards and ICS require dedicated supervisory personnel, there are in-house considerations as well. A dedicated supervisor(s) must be assigned to each shift. Duties shall include, but not be restricted to, the following:

- Provide coordination and direction during major emergency incidents, such as severe weather, high profile incidents, wildfires

- Available for problem solving

- A single point of contact for subscriber agencies

- Readily able to identify areas for growth among subordinates

- Allows for formalized development of career paths

- Document employee performance for annual/periodic reviews

- Provide a narrow scope of supervision when implementing new policies and procedures

- Provide additional supervision for diversified complex tasks

- Stay current with technological changes/advancements

- Provide guidance to new employees who have less training and experience

- Impart greater knowledge of laws, procedures, and administrative processes

- Focus on the operations of the ECC and not have to split responsibilities with a dispatch position

- Focus on customer service to public, subscriber agencies

- Allow for improved communications with management, subordinates, and subscriber agencies

- Spend more time with subordinates individually, daily

- Allow for operational efficiency

- Identify areas for remedial training, counseling, or discipline, when appropriate

- Address issues upon occurrence, not after the fact

- Set operational and administrative priorities

- Allow for delegation of tasks and responsibilities

For the purposes of the supervisor staffing estimate *FE* reviewed the number of call-taker and dispatch positions that needed to be staffed for each hour of the day. Then, using the recommended optimal span of control of one supervisor for every five to ten employees, the average number of supervisors per shift is one, or a total number of five supervisor positions.

6.5 *Methodology for Staffing Recommendation*

FE uses the Association of Public-Safety Communications Officials (APCO) Project "Responsive Efforts to Address Integral Staffing Needs" (RETAINS) criteria to determine the number of employees required to staff the projected number of workstations. The following steps, data application and calculations, are performed in accordance with the APCO RETAINS guidance.

The annual number of work hours per employee working twelve-hour shifts is 2,184. The formula begins by subtracting the reported standard leave such as vacation, personal,

compensation, training, and sick time, to arrive at the total available work hours per employee. The total number of annual work hours in this study is 1,524 hours per employee, based on the following average human resources criteria, provided by the City:

- Vacation and holiday time – 274 hours

- Sick – 106 hours

- Personal/Comp Time - 78 hours

- Training - 24 hours

- Other - 0 hours

- Lunch/Breaks – 75 minutes per shift

To arrive at the recommended model, the final number of employees required to cover call-taking functions is added to the number required for dispatch functions, and any required dedicated Supervisor positions, to determine the total required number of HCC staff. Based on the estimated hourly call volume *FE* recommends a horizontal operational model with dedicated call-taking and dispatch positions.

6.5.1 Recommended Staffing Model

The following Tables 13 and 14 provide the recommended personnel count for the City of Hayward, with and without turnover.

Table 13 – Recommended HCC Employees - No Turnover

Recommended Staffing - HCC	
Position Title	**Total Number of Employees**
Shift Supervisors	6
Dispatchers	23
Call-Takers	24
Total PSAP Staff	**53**

Table 14 – Recommended HCC Employees - With Turnover

Recommended Staffing w/Turnover - HCC	
Position Title	**Total Number of Employees**
Shift Supervisors	7
Dispatchers	27
Call-Takers	28
Total PSAP Staff	**62**

The model above assumes the following:

- 12-hour shifts

- Horizontal operational model with dedicated call-takers

- Dedicated shift supervisors who are not tasked with any call-taking or dispatch responsibilities and enough to satisfy best practices span of control

- The same number of primary law enforcement and Fire/EMS primary dispatch positions as exists today

Based on Erlang C calculations and the RETAINS formula, the minimum projected communications staff needed in the HCC is eight employees and the maximum number needed is ten employees. *FE* calculated this minimum projection, using the reported 9-1-1, administrative/non-emergency call volume and required number of primary dispatch positions. It is important to remember these positions are listed here more as functions and not necessarily as employee trained skills (e.g., Fire/EMS and PD dispatcher). Cross training in both call-taking and dispatching is required to achieve a full complement of staff and to meet industry standards in the processing of the calls and overall workload. See Table 15 below.

Table 15 – Recommended Staffing by Hour of the Day

HCC						
Hour	**% Per Hour**	**Per Hour for Month**	**Call Takers Needed**	**Dispatch Needed**	**Supervisor Needed**	**Total Positions**
0:00	2.82%	23.4	3	4	1	8
1:00	2.47%	20.5	3	4	1	8
2:00	2.38%	19.7	3	4	1	8

Hour	% Per Hour	Per Hour for Month	Call Takers Needed	Dispatch Needed	Supervisor Needed	Total Positions
			HCC			
3:00	1.95%	16.2	3	4	1	8
4:00	1.85%	15.3	3	4	1	8
5:00	1.92%	15.9	3	4	1	8
6:00	2.42%	20.1	3	4	1	8
7:00	3.45%	28.6	4	4	1	9
8:00	4.64%	38.5	4	4	1	9
9:00	5.08%	42.2	5	4	1	10
10:00	5.50%	45.6	5	4	1	10
11:00	5.44%	45.2	5	4	1	10
12:00	5.93%	49.2	5	4	1	10
13:00	5.43%	45.0	5	4	1	10
14:00	5.83%	48.3	5	4	1	10
15:00	5.86%	48.6	5	4	1	10
16:00	5.38%	44.6	5	4	1	10
17:00	5.34%	44.3	5	4	1	10
18:00	5.44%	45.1	5	4	1	10
19:00	4.85%	40.2	5	4	1	10
20:00	4.43%	36.7	4	4	1	9
21:00	4.18%	34.7	4	4	1	9
22:00	3.98%	33.0	4	4	1	9
23:00	3.45%	28.6	4	4	1	9
TOTAL	**100.00%**	**829.5**	**4.17**	**4.00**	**1.00**	**9.17**

Note that these recommendations do not include administrative or additional support/maintenance positions, such as training, QA, systems administrator(s) or support for CAD, telephone, and radio.

The staffing projections represent the number of full time equivalent (FTE) employees needed to staff, at a minimum, three call-taking, four dispatch positions and one supervisor positions during the slower periods of the day. During the busier times of the day five call-taking, four dispatcher and one supervisor position would be needed.

Further, the staffing analysis included current call volume and workload analysis in the HCC, and because EMD call processing does not currently take place in the HCC, there was no data available to include medical call processing accurately. *FE* does not recommend implementing medical call-taking until staffing levels have increased to support current workload. Then, once medical call-taking is implemented, data will be

available to analyze for any increase in workload/call time. To that end, HCC will be able to monitor closely and augment staffing accordingly. Additionally, the initiative to procure and implement medical call-taking and dispatch protocol can begin now; by the time it is ready for implementation, ensure staffing levels have increased to support it.

A re-evaluation of available statistical call volume and data should be performed bi-annually to validate accuracy in staffing recommendations. Annual audits and calculations should be performed to track workload fluctuations and to provide support/justification during budget planning when additional staff is needed.

6.5.2 Recommendations for Staffing & Recruiting

The HCC is at a critical staffing deficiency and before any other initiatives are implemented, or considered, staffing must be at adequate levels. The stress of call volume and caller or incident induced stress, combined with the requirement to work significant overtime to cover shift shortages is resulting in burnout. This, coupled with the natural attrition that will occur in 2022 will place the HCC in a position where an alternative plan is required to ensure 9-1-1 calls are answered and processed.

Implementing any new initiatives without first addressing the staffing crisis could essentially push staff 'over the edge' to the point where HCC loses its current, experienced staff due to fatigue, burnout, or exasperation.

Further, recommendations with respect to immediate recruitment and hiring are addressed in Sections 3 and 4 of this report, however, considering the dire situation that the HCC is currently experiencing, it would be reasonable for leadership to develop an interim contingency plan to ensure HCC is resilient if more employees than expected, suddenly leave, or become ill. A strategic back up plan will ensure operations can continue in the face of that staffing collapse. Leadership would need to consider the options available to them and have a plan in place in the event the unthinkable happens.

Considerations include:

- Would frontline police and fire staff be deployed in the center?
- Is another center able to assist by re-routing HCC calls to their PSAP?
- Would the center do a media release advising that only 'emergency' calls are being accepted?

FE offers the following recommendations and guidance for addressing staffing including:

- Increase the minimum on duty staff from six employees to eight; and increase optimal staffing to ten employees.

- Increase overall number of authorized full-time employees in HCC from 33 to 53 (at minimum) while working toward the recommended 62 full time employees to account for turnover.

- To quickly address critical level of staffing issues, look at secondment of staff from Police and Fire first, other City departments second, to bridge staffing gaps until critical staffing levels are addressed. These would be temporary reassignments in HCC as Communications Officers, with an approximate 12 – 18-month range assignment.

- Fill the Administration Supervisor position as soon as possible to plan, coordinate, and support the recruitment and training of new personnel.

- To achieve recommended staffing levels in a timely and successful manner, both lateral experienced candidates, along with entry level candidates, must be recruited simultaneously. Every effort should be made to attract candidates who are already experienced and qualified to work in an ECC.

- The recruiting process must be accelerated by creating efficiencies in onboarding entry level and experienced candidates immediately.

- Shorten the process for entry level applicants – explore fast track recruiting for a fire/medical call-taking, Fire Dispatch position without POST requirements. (POST requirements can be made a condition of employment to be reached within a specified period. These employees would not handle police call processing in the center).

- Improve recruiting process for lateral experienced candidates by creating an incentivized program for attracting qualified candidates. A review of current wages, incentives, signing bonuses, etc in the region will be necessary to ensure competitiveness in the market. Compare to current practice for Hayward Fire and Police lateral/experienced hire program, and other ECCs in the area.

- That HCC utilize NFPA 1225 (2022) Chapters 4 - 11 Standards and NENA Standards for Hiring and Selection to inform their recruiting practices for the HCC.

- That HCC continue to follow and adhere to any standards and requirements as indicated by California POST, but that it not unnecessarily hinders the timely recruiting and onboarding of additional staff.

6.6 Next Generation 9-1-1

NENA and other organizations are working on NextGen 9-1-1 (NG9-1-1) standards development, CAD system interoperability and the exchange of information between those applications. As these standards continue to evolve, they should be monitored, considered, and incorporated in any new interfaces between NG9-1-1 applications and CAD systems.

Some of the same standards can be used for any future CAD-to-CAD interfaces. Many of the CAD vendors are still assessing their future need to interface and accept the additional information that NG9-1-1 data will provide. At the same time, vendors are trying to determine the actual cost that will be encountered as the needed functionality is developed and deployed.

In the first phase of NG9-1-1 implementation there will not be a significant impact to frontline staff workload. The first phase of implementation will consist primarily of new technology infrastructure for the NG9-1-1 system and will encompass new call handling technology. The impact will consist primarily around the new technology training and internal process changes for frontline staff.

6.6.1 Recommendations

HCC should continue to work with CalOES on the implementation of Next Generation 9-1-1.

While there is no immediate urgency to add additional staffing specifically for NG9-1-1 transition in the early stages, there will likely be additional staffing requirements in later phases of NG9-1-1, such as when media interfaces to 9-1-1 are introduced. This is a primary reason current center staffing must be adequate going into NG9-1-1 and it becomes imperative that HCC monitor call volume and workload closely to ensure adequate staffing levels and shift patterns support operations, and augment staffing accordingly.

It is important to monitor not only call volume but also utility rate, or time required on tasks, as NG9-1-1 implementation progresses. Call volume alone will not provide an accurate understanding of total workload capacity and activity rate, which can be affected by ancillary tasks and further processing time and action required for calls involving text messages, video and pictures and other methods of receiving 9-1-1 calls and obtaining and processing information.

6.7 IT Support Model

The Information Technology (IT) team is an integral component for any public safety agency. Therefore, it is critical that the existing IT staffing and support model be considered in a project of this nature which combines a staffing analysis for the HCC, EMD implementation feasibility, and pilot project support for the National 9-8-8 Program as well as Hayward Mental Health & Crisis Response initiatives. Every project and new program, along with the policy and process that accompany them, at many points, have overlap and integration with technology and systems. New programs and processes may require augmentation to the current system, the introduction of new process and/or technology, and the knowledge, skills, staffing capacity, and business process in place to implement and maintain them from an IT perspective.

Today, HCC, HPD and HFD are supported by a cross section team consisting of Public Safety dedicated IT resources, and cross-trained City of Hayward IT resources. The IT support team consists of:

- A Public Safety IT dedicated team with:
    - one programmer who is assigned to HCC, HPD, and HFD interfaces and software.
    - Two "tech teams members;" one assigned to HPD and the other assigned to HFD, both are located at HPD Headquarters.
- Two City of Hayward staff that focus on network support. They are responsible for the network management and support for the entire City and are not solely dedicated to HCC, HPD or HFD.
- Additional City of Hayward IT members are brought in on projects and work tasks as needed, and dependent upon skill and scope required.

This team will continue to support HCC, HPD and HFD with their current system and support needs and will be required to support the EMD feasibility outcome, such as implementation and maintenance of an electronic call-taking protocol and the interfaces to and from CAD, Mobile CAD, RMS, and other technology, and the National 9-8-8 Program, Mental Health & Crisis Response programs, and their technological needs.

Additional upcoming projects on the horizon for HCC, HFD, and HPD that will require the IT Support team include:

- NG9-1-1 transition for HCC.

- HFD has expressed they have several innovative programs and approaches to service delivery that they will be implementing over the next several years, along with a transition to cloud-based technologies.

6.7.1 Recommendation

The above noted additional projects, combined with the projects referenced in the scope of this report, will also need to consider the involved changes/additions to technology and support and the staffing impact it may have overall. It is recommended that dedicated IT resources be assigned full time to the HCC. Consideration must also be given to a succession plan that ensures additional resources be cross trained in support of the HCC IT needs.

6.8 Workload and Performance Data Indicators

The information in this section includes statistical information for phone calls and CAD events that are processed by the Hayward Emergency Communications Center.

6.8.1 Performance Data

- Average number of abandoned calls received per day: 6.26%

- They answer 98.75% of 9-1-1 calls within ten-seconds or less

- The average talk time for 9-1-1 calls is 1 minute, 56 seconds

- The average call wrap-up is between 30 and 60 seconds

- The busiest day of the week is Saturday

- Busiest time of day is 1700-1800

- The busy month is July

6.8.2 Telephone Statistics

The following tables depict the telephone call volume as reported for the years 2018 through 2021.

Table 16 – Phone Statistics

Phone Statistics					
Hayward Police Communications	**2018**	**2019**	**2020**	**2021**	**Average**
9-1-1 Calls	68,380	72,028	67,871	65,292	68,393
Total Non-Emergency	145,322	147,014	142,595	140,917	143,962
Text to 9-1-1 Calls	220	248	279	306	263
Outgoing Calls	88,778	90,457	82,563	80,584	85,596
Total	**302,700**	**309,747**	**293,308**	**287,099**	**298,214**

Table 17 – Percentage of Total Calls – 2021

% of All Calls	**2021**
Total Calls	287,099
% of All Calls that were 9-1-1	22.7%
% of All Calls that were Ten-Digit	49.1%
% of All Calls that were Text to 9-1-1	0.001%
% of All Calls that were Outgoing	28.1%

6.8.3 CAD Statistics

The following tables depict the total number of CAD Events as reported for the years 2018 through 2021.

Table 18 – CAD Events

CAD Events					
Agency Type	**2018**	**2019**	**2020**	**2021**	**Average**
# of Law Enforcement Incidents	108,752	94,813	114,333	101,318	104,804
# of Fire Incidents	17,929	19,447	18,379	17,173	18,232
# of EMS Incidents	14,893	16,056	14,652	13,103	14,676
Total	**141,574**	**130,316**	**147,364**	**131,594**	**137,712**

Table 19 – Percentage of CAD Events – 2021

% of CAD Events - 2021	
Total Events	131,594
% of Events that were Law	77%
% of Events that were Fire	13%
% of Events that were EMS	10%

6.9 Call Flow Description

Calls for Department are received from 9-1-1, ten-digit emergency and non-emergency methods.

ANI/ALI information is available and interfaced to drop into CAD for 9-1-1 calls received.

The HCC is designed to operate in a horizontal call model where there are separate call-taker and dispatcher workstations that provide one or the other role, but not both. However, due to a combination of call volume and staffing shortages, it must frequently operate as a hybrid vertical/horizontal call model where at times dispatchers are answering 9-1-1 overflow calls and dispatching resources to those calls, in addition to the other calls they are tasked with dispatching resources to.

There are workstations assigned specifically for call-taking, and others specifically assigned to dispatching. Call-taking workstations have phone call handling and Computer Aided Dispatch (CAD) technology, but do not have radio console or dispatch capability. Dispatch workstations have CAD, phone call handling, and radio console technology and are capable of full call-taking and dispatch.

9-1-1- calls are first answered on the call-taking workstations. While calls are answered in these positions first, each workstation in the center is outfitted with all 9-1-1 lines, ten-digit emergency and non-emergency phone lines, and the Comtech Text to 9-1-1 solution. In the event all call-takers are already on 9-1-1 calls, overflow 9-1-1 calls will be answered and processed by the Supervisor, or by dispatchers at the Police Comm 3 Dispatch position or the Fire Dispatch position.

The call-taker completes the call-taking process in CAD, and the call drops into the pending screen for dispatch. Fire calls are indicated by a red background in CAD and will drop onto the Fire Dispatch CAD. Police calls will have a blue background and will drop into the Police Dispatch CAD. The corresponding Dispatcher will then dispatch Police or

Fire calls, as necessary. Police calls are assigned by District. Districts A, B, C, D, J are for North Patrol. Districts E, F, G, H are designated South. Fire calls are dispatched by one of the nine station areas that they are occurring within and based on the corresponding response plans (pre-programmed in CAD for unit recommends) depending on call type.

6.10   Call-Taking and Dispatch Protocols

The HCC does not utilize an industry specific call-taking and dispatch protocol such as the International Association of Emergency Dispatch (IAED) Emergency Police Dispatch (EPD) protocol, Emergency Fire Dispatch (EFD), APCO Protocol, PowerPhone, Criteria Based Dispatch (CBD) or other similar industry protocols.

6.10.1   Police Call-Taking Procedure

Hayward Police Department has created policy and procedure specifically for the call-taking and dispatch of police incidents. There is no specific detailed format for call-taking interrogation where it is consistently applied among all call-takers. Communications Operators are trained to the policy and procedure which guides their call-taking and dispatch processes. These policies are not accessible to the staff either via desktop or binder at the workstation; however, policies are available via web-based application called Lexipol Policy and Procedure.

6.10.2   Fire Call-Taking Procedure

Fire call-taking and dispatch is also guided by policy and procedure. The policy and procedure are informed by HFD policy, procedure, and response plans. Extensive efforts have been made in recent history to expand and improve fire call-taking and dispatch procedure and training, as well as create a deeper understanding in the HCC of HFD service delivery in the community.

6.10.3   Recommendations

- That HCC implement an industry standards-based call-taking and dispatch protocol for police, fire, and medical calls for service such as International Association of Emergency Dispatch (IAED) Emergency Police, Fire or Medical Dispatch protocol (EPD, EFD, or EMD), APCO, or PowerPhone.

- It is further recommended that as a start, consideration be given to implementing EMD and EFD. Once HCC staff has adjusted to the scripted protocol format,

consideration should then be given to the adoption of EPD. The adoption of structured protocol call-taking systems will reduce risk to the agency, public, responders, and to call-takers by increasing the quality and priority of information transfer gathered and relayed to responders. Utilizing a proven, effective protocol system ensures that information gathered is incident specific, and not emotionally based or biased. Events will be accurately and consistently prioritized based on information that is gathered in a manner that addresses the most important and scene safety/life threatening information first. Call-takers are able to focus on active listening, situational awareness, and providing compassionate customer service as they do not have to try to think of appropriate questions or instructions 'on the fly.' A protocol system provides a standardized, consistent step by step process to gather pertinent information and provide instructions to retain evidence, keep the caller safe, and provide lifesaving pre-arrival instructions such as CPR, childbirth, trapped in a burning building or sinking vehicle instructions.

- This will streamline and accelerate training, provide consistency and standards, reduce risk & cost, and improve performance.

- Immediately results in new recruits who can be trained and are ready to work quicker, who feel prepared & confident to take on the role and will complete the training period and remain as employees.

- Lateral/experienced candidates may already have protocol certification and experience, which will accelerate their training and integration.

- Commercial protocol programs provide training directly to your employees to certify them for protocol use, and/or in their quality assurance and improvement programs. HCC will not have to create and deliver that training in house, reducing the training workload, and accelerating training and certification of staff.

- A standardized protocol results in consistency that is measurable through QA/QI processes, which also improves training, performance, job satisfaction, and reduces risk & cost.

6.11 Call Flow Process

6.11.1 9-1-1 Call Triage and Process

- The HCC call-taker answers the 9-1-1 line on the VESTA 9-1-1 call handling screen and triages the call asking, "Hayward 9-1-1, what is the address of the emergency?". This is done to ensure it is for Hayward's service area. If it is not the caller will be routed to the correct 9-1-1 center.

- o Out of district calls on the freeway are sometimes routed to HCC but need to be routed to California Highway Patrol (CHP) as it is their jurisdiction.

- Simultaneously the "E9-1-1 Queue" will pop up on the VESTA 9-1-1 call-taking screen. The call-taker will verify to ensure the Phase II addressing information is available (for wireless calls) and if it is not, will utilize Rapid SOS software to gather the GPS data of the caller's cell phone's location. Once this is obtained, they will click on the E9-1-1 Queue box so the call information will be transferred over to the CAD call form.

- The call-taker continues with the call-taking triage process by asking "Do you need police, fire, or ambulance?"

6.11.2   9-1-1 Call for Hayward Police Service

- The call-taker verifies the address and nature of the call and enters this information into CAD. Additionally, the call back number of the caller and the caller's name is also obtained but may not always be obtained until later in the call.

- Once the call type is chosen from the drop-down list in CAD (or entered via command line function), the call priority is automatically assigned according to call type code. The call-taker can over-ride the priority level if circumstances dictate. For priority in-progress calls, the call-taker remains on the line until officers arrive.

- The call drops into the pending screen in CAD for the dispatcher assigned to the 'Comm1' workstation. There are no audible or visual signals to indicate to the Comms Operator that there is a new call for dispatch.

- The dispatcher reviews the incident and priority, and dispatches officer(s) accordingly, keeps track of their status, as well as adding pertinent notes as required.

- Call-takers run queries in NCIC and NLETS, as well as any other checks necessary for processing calls while preparing the call for dispatch.

- Dispatchers may also run NCIC and NLETS queries and complete 'Premise alerts' check for special address information, and any other pertinent information gathering required for officer support.

- Dispatchers maintain radio contact with responding officer(s) and support as necessary and document pertinent call details in CAD comments section.

- Monitor officer safety and perform safety checks as necessary for officer(s) on the call. Unit alerts are automatically created by CAD on all P1 and Traffic Stop events. Communications Operators must do a verbal check on the officers for these events.

- Once call is complete, the officer clears from the event using their MDT in the police vehicle, and subsequently transfers the call out of the CAD screen. This indicates that the officer is ready for any pending calls. No dispatch code is required for officers to clear from an event. Each Call for Service (CFS) has a unique event number automatically created in CAD.

6.11.3   9-1-1 Call for Hayward Fire Department Call

- The call-taker verifies the location of the emergency, the nature of the call, and will enter this information into CAD. Additionally, the call back number of the caller and the caller's name is also obtained but may not always be obtained until later in the call.

- Once the call type is chosen from the drop-down list in CAD (or entered via command line function), the call is ready to be entered into pending. There is no audible alarm or visual cue to indicate a new fire call is ready for dispatch.

- Once in the pending screen, the call will present on the Fire Comms Operators CAD and be ready for dispatch. Once the call is selected, unit recommends will automatically be presented to the dispatcher based on criteria such as call type, priority, and location.

- The dispatcher will confirm the correct units are recommended against the response plans and will add additional units if required based on new information.

- The units will be marked as dispatched in CAD, and this will trigger the station alerting technology to send out paging/alert tones to the station(s) selected for dispatch and copy to the radio if a crew is out on the air. The station alert will include tones, location, and nature of incident.

- The call information will also present on the fire apparatus Mobile CAD (MDTs). Crews will acknowledge receipt of the dispatch over the radio and will either radio once enroute to the call and/or update their status on the Mobile CAD.

- The Comms Operator will continue to support the crew with status updates, support requests, capturing ICS or Blue Card benchmarks, and performing and recording any other supportive measures as requested by the Incident Commander.

- Once the crew returns to service, they will use their Mobile CAD to indicate such, and this transfers the call off the active incidents in CAD and indicates the fire units are ready to be assigned to any incoming calls.

6.11.4   9-1-1 Call for EMS

- When EMS is requested the HCC call-taker will verify the location of the emergency and enter "Medical" in the CAD narrative/notes.

- They will then obtain further details such as nature of the medical call, patient's age, and sex, and COVID screening questions. They will enter this information into CAD and ask the caller to stay on the line while they transfer them to ACRECC.

- If EMD is not required, HCC staff contact ACRECC directly to provide the information required to dispatch EMS

- A supervised call transfer is conducted to ACRECC, and the call is introduced to the EMS call-taker along with the address, nature of call, and patient details provided to HCC.

- Simultaneously the call information in HCC CAD is entered as a medical call, and entered into pending, where it presents on the Fire Dispatch workstation. There is an audible message that indicates a new call is ready for dispatch.

- Once the call is selected, unit recommends will automatically be presented to the dispatcher based on criteria such as call type, priority, and location.

- The dispatcher will confirm the correct units are recommended against the response plans and will add additional units if required based on new information.

- The units will be marked as dispatched in CAD, and this will trigger the station alerting technology to send out paging/alert tones to the station(s) selected for dispatch and copy to the radio if a crew is out on the air. The station alert will include tones, location, and nature of incident.

- The call information will also present on the fire apparatus Mobile CAD (MDTs). Crews will acknowledge receipt of the dispatch over the radio and will either radio once enroute to the call and/or update their status on the Mobile CAD.

- The Comms Operator will continue to support the crew with status updates, support requests, capturing benchmarks, and performing and recording any other supportive measures as requested by the Incident Commander or as requested from ACRECC.

- Once the crew returns to service, they will use their Mobile CAD to indicate such, and this transfers the call off the active incidents in CAD and indicates the fire units are ready to be assigned to any incoming calls.

6.11.5   9-1-1 Call for Psychological Incidents (Psych Call)

- When EMS is requested the HCC call-taker will verify the location of the emergency and enter "Medical" in the CAD narrative/notes.

- They will then obtain further details such as nature of the medical call, patient's age, and sex, and COVID screening questions. If EMD instructions are required, they will enter this information into CAD and ask the caller to stay on the line while they transfer them to ACRECC.

- When the caller indicates the medical call nature is for a "psych" (psychological) call, they will interrogate further to determine additional resources. The call is not transferred to ACRECC.

- A psych call will get police response first - the call will be entered and dropped into the Comm 1 Comms Operator CAD for dispatch. Police will respond first to determine if the patient is "5150" and if they qualify for EMS response. If they do, HCC will contact ACRECC and request an ambulance Code 2 5150 to the location of the incident.

- The status of the ambulance arrival is relayed from the HPD officer on scene to the Comm1 Operator and is updated in CAD.

- Once the call is complete, the officer will mark themselves back in service on their MDT and the call will transfer out of CAD.

6.11.6   10-digit Emergency Lines

Calls received on these lines are typically from alarm monitoring companies or other allied agencies who are transferring non-9-1-1 calls or requesting assistance at an incident. As these calls are not received through the 9-1-1 system, ANI/ALI information is not available for them. The call location and nature of incident is collected and entered into CAD along with the callback number, caller's name, and any other pertinent details related to the call, specifically regarding scene safety.

6.11.7 Police Complaint Line

The police complaint line is dedicated as a non-emergency line for the public to call for police assistance. Many calls for service are received on this line of varying nature from parking complaints to information requests. Often calls that would have been better made through the 9-1-1 system and can be high priority in nature, are also received on this line, but the caller has opted instead to use a non-emergency line. The disadvantage of receiving high priority calls on a non-9-1-1 line is that ANI/ALI information is not available to the call-taker and can at times make location verification difficult.

6.11.8 10 Digit Non-Emergency Lines

Calls for service are received on these lines and include general, public inquiry lines, as well as Animal Control requests for dispatch. Additionally internal requests for City departments handled by HCC are received on these lines and include service for the City's Public Works and Utilities Department, which include Facilities Management, Fleet Management, Landscape Maintenance, and Streets Maintenance.

6.11.9 Recommendations

Reduce or remove non-essential workload: Immediately consider transitioning any value-add work for non-emergency departments to another 24/7 group of City employees (or contract out externally), until the center is at full staffing. This includes animal control, public works, Facilities, Fleet, etc. This will assist with reducing the workload on a team that is already stretched thin for resources. As there are no specific POST requirements for this workload, other City staff can be onboarded and trained to provide this work, without much complication.

7. Behavioral Response

The City of Hayward has implemented a new pilot project as a response to recommendations made by the City's Policy Innovations Workshop. The 'Hayward Evaluation and Response Teams (HEART) Program' is a diversion program with the goal of improving access to medical, mental health and other support services, as well as reducing the need for police officers to intervene in calls for service involving people experiencing mental illness, substance-use disorders, as well as the unhoused. It is also intended to ensure that the Hayward Police and Fire Departments are working to establish an integrated continuum of options allowing for the most appropriate responses to calls to the Hayward 9-1-1 dispatch center. The current program mandate is to demonstrate reduced police violence or escalation in mental health calls by deploying two different mobile response teams, the Mobile Evaluation Team (MET) and the Mobile Integrated Health Unit (MIHU).

Medical 9-1-1 calls down-streamed to ACRECC can utilize the Community Assessment and Transport Team (CATT) deployed by Alameda County Behavioral Health and Falck Ambulance. CATT partners a mental health professional and a paramedic to respond to non-violent psychological emergency calls for service and provides mental health assessment, crisis intervention, medical assessment, information, referral, and transportation to a variety of voluntary settings. If the nature of the call is behavioral health or substance abuse related, and meets the criteria for CATT, a CATT unit can be requested by the officers or paramedics at the scene. CATT requires police to be on scene to determine if scene is safe and the subject is cooperative. CATT is dispatched by the Alameda County Regional Emergency Communications Center (ACRECC) and is available seven days a week from 7 AM to 11 PM. CATT is not accessible directly by the public.

7.1 Mobile Evaluation Team (MET)

Launched in June of 2021, the Mobile Evaluation Team (MET), pairs a mental health and negotiation trained Hayward Police Officer (District Command) with a behavioral health clinician from Alameda County Behavioral Health Care Services (ACBHCS). MET is designed to respond to any call suspected of involving a mental health crisis to provide on-scene crisis intervention and referral. MET can respond first instance to behavioral health calls that are appropriate, or as a secondary response when requested by units on scene. MET assistance is requested by Dispatch or Patrol via radio. MET works 40 hours a week, Monday-Friday, during business hours only, and the team is not available for call-out.

The ACBHCS clinician enters information regarding response into the Alameda County Health database. If the response is only behavioral in nature, there is no report entered into the HPD Records Management System (RMS). The number of calls responded to by MET can be obtained by running a Unit History on District Command 33 (Unit Designator).

7.2 Mobile Integrated Health Unit (MIHU)

Launched in January of 2022, the Mobile Integrated Health Unit (MIHU) pairs a Hayward Fire Department paramedic with a mental health clinician, who splits her time between MIHU and the behavioral health program coordinator position. The behavioral health coordinator assists the Program Administrator with data, organizing the team, doing capacity building, and connecting (navigating systems to be used by first responders).

Currently MIHU proactively locate public service calls or utilize referrals/requests for service from HFD units and then conduct follow ups. MIHU is never dispatched directly from HCC, their mandate is pre and post crisis response. Pre-crisis intelligence led response, (MIHU responds to locations known to have a high number of social disorders calls for service) enables the team to proactively connect with high users of service to build relationships and attempt to connect the person with appropriate services to decrease the likelihood of that person ending up in a crisis situation. Additionally, HFD can request MIHU respond to a scene to take over a call, if appropriate. A high number of the interactions MIHU is currently involved in are follow up referrals from HFD resulting from repeat calls for service or recognition that a subject requires assistance with system navigation. MIHU will connect with the subject to assess, provide medical services, educate, and/or connect to appropriate services. MIHU is operational 20 hours per week, business hours only.

MIHU data is documented by both the attending paramedic and the clinician, but each uses their own separate process and system. Whether the team proactively locates an event, or they are called by HFD to assist at the scene, MIHU starts the call by contacting HCC by phone or radio and requests that a 'Call for Service' be created in CAD. Once the call is completed, the MIHU paramedic completes a report via HFD's Records Management System "ESO" which captures the information for Electronic Health Record (EHR) purposes. The paramedic is entering data in a way that will enable data mining of specific, MIHU calls for service. The clinician also tracks the incident through a work-around Microsoft form designed by the team and an analyst. The Microsoft forms remain within the unit as their 'shift notes' that contain the narrative of their interactions. This form was developed to report on program outcomes without identifying the subject of the interaction. The information reported in ESO is cross-referenced to the Microsoft form by

the unique incident number created by HCC Dispatch. By cross referencing the two forms, specific client information can be obtained if necessary.

7.3 Observations

Although currently operational, no formalized process has been developed for HCC to identify, categorize, triage or dispatch calls that are appropriate for MET or MIHU. HEART is a pilot project and is currently determining which calls are not only appropriate for their response, but also what calls they have the capacity to respond to. Current deployment model has the teams actively working in the community to explore the most appropriate response model to support the overarching goal of behavioral diversion away from Hayward Police and Fire.

The CAD system does not have separate codes for noting how the call came into the agency (call type) and what happened at the end of the call (disposition codes). There is currently an 'informal' HCC process intended to intercept 'psychological' calls for service to ensure an HPD unit is initially dispatched first, either MET (if available) or a patrol unit (ideally a unit with an officer trained in Crisis Intervention). The intent is to have HPD attend first to declare the scene 'safe' and to determine if EMS is required for a mental health warrant (51-50). This process is very reliant on the caller to self-disclose the nature of the call. HCC staff are not provided with training or process to interrogate callers to glean specific information that would indicate the call is appropriate for this type of response.

MIHU is not dispatched by HCC at this time. HCC staff have little or no familiarity with the MIHU program and were only anecdotally aware that they were launching the week following our visit.

MET officers do not create an HPD report in the HPD Records Management Systems (RMS) for behavioral health calls, therefore there are no details regarding call response, action taken, or outcomes on the police side. The CAD chronology is generic and will only contain location, reporter, and transport information.

MET data is entered on the health side, by the clinicians who provide clinical mental health services, whether in the initial contact or follow up. The clinical records are generated in the City's Youth and Family Services Bureau (YFSB) Salesforce database for clinical record keeping.

The data that is collected by the ACBHCS clinicians cannot be directly extracted and analyzed by the HEART Program as Hayward is not deemed a unique 'reporting unit and

is currently included in the entire 'South County' database. This gap is currently being rectified by a Memorandum of Understanding, and ACBHCS will be creating a separate reporting unit for Hayward to be able to glean this data.

Currently the HEART Program has no effective method of analyzing the data to share findings or outcomes with their stakeholders. There is no tool or 'formally' designated analyst to compile the data to track and understand the dispositions of behavioral health calls for service. This information is necessary to provide insight into the level of need for community-based services, the impact the program is having on reducing inappropriate response of law enforcement to behavioral health incidents, the outcomes of HEART vs. non-HEART responses, and the reduction of violence in this type of call. There is no efficient way to search the data for previous behavioral event interactions between first responders and persons experiencing behavioral health events. As this baseline data is not accessible, it is important that HEART have the ability to report back to the community and council on the ongoing positive impact that this risk-driven intervention program is having.

Currently, data for the HEART Program is entered into several different systems that are not integrated and not designed to accurately track or evaluate certain critical aspects of the program. These include, but are not limited to, the following methodologies:

- Process - The implementation of policies, process, and procedures specific to program delivery has begun.

- Outcomes - Determining the results of the program.

- Quality assurance & quality improvement - Measuring the consistency, success, and effectiveness of the programs, along with continuous analysis to ensure gaps and barriers are addressed so that improvement is ongoing.

- Cost benefit/cost savings - Data that provides a quantitative way to compare the cost of the program with previous delivery/response methods.

- Impact - Determining the impact of the program on the targeted demographic. There may be other unintended impacts which are important to report as well, such as public safety, community wellness, and First Responder attitudinal shift.

- Effectiveness - Did the program meet its intended goals and objectives.

- Capacity - Was the current model able to meet the community needs as outlined by the mandate and is the model sustainable.

It is important to recognize that the innovative changes the City of Hayward is making is ground-breaking. There is no framework or process map that can be utilized, as the Behavioral Health programs are unique to the City of Hayward and are being designed for the issues unique to the community. Traditional IT systems that contain the data needed, were not designed with this purpose in mind and as such, will need to be strategically altered so that the required information can be extrapolated.

7.4 Recommendations

A workshop involving all stakeholders, facilitated by Federal Engineering, is currently in the works and will provide an opportunity to align goals and strategically develop a plan to ensure the data required to support the goals of the program is accessible.

Stakeholders will brainstorm and collaborate to:

- Determine which calls for service are appropriate for MET and MIHU response

- Create the CAD codes and RMS classification to delineate those calls for future data mining

- Develop a Dispatch Risk Matrix to accurately classify the MET/MIHU appropriate calls for service

  o Process needs to consider alternative response when HEART is unavailable

  o Process needs to consider future 9-8-8 appropriate calls

  o Process requires creation of Dispatch Steering Committee to continually monitor and evaluate the program and implement required changes when necessary

- Develop a training and communication plan for all frontline and HCC staff

- Assign an analyst dedicated to HEART to ensure quantitative and qualitative data is aggregated from all touch points

- Consider a Case Management Software program that can provide a data infrastructure and tell HEART's success story.

- Develop a plan for change management

- Employ legal advisors to create a Memorandum of Understanding for all stakeholders effected by the new process. Leadership must collectively accept the risk and ensure continued cooperation and support for the new process.

An effective behavioral health initiative needs to consider diversion all along the continuum of care, starting with the HCC. This workshop will serve as a systems mapping exercise to inventory not only the present and future diversion services, but also the current and future data required to ensure that community needs are being met. This workshop is a vital step to foster the systemic change required for the success of HEART.

8. Training Practices and QA Review

8.1 Training

Although the Hayward Police Department provides administrative oversight of the HCC, the Police Training Unit does not provide training support to the center. Historically, they have been left to manage training on their own. There is no designated Training Coordinator position built into the Hayward Communications Organizational Chart, but this function has previously been supported by the Administrative Communications Supervisor special assignment role, in conjunction with the Communications Training Officers (CTOs). However, the Administrative Communications Supervisor position has been vacant for two years due to staffing shortages.

Training program oversight falls to the Communications Center Administrator, and coordination and delivery of training falls on a Shift Supervisor that has taken on the task in addition to their current duties. This position has direct oversight for development and delivery of the HCC training program, and is responsible for coordinating the training schedule, reviewing training evaluations, and providing the Communications Administrator with a weekly training report. This position also facilitates the onboarding of new hires with the City of Hayward and delivers all the classroom, theory, and practical training for the new employees.

This includes, but is not limited to:

- Area familiarization,
- Policies and procedures,
- Technology and systems,
- Call-taking and dispatch theory, and
- Hands-on training.

The Training Coordinator is assisted by an ad-hoc Training Committee consisting of other Shift Supervisors and Communications Training Officers (CTOs) on a voluntary basis. Each person on the committee is responsible for a section of the training manual currently in development. The committee conducts 'peer review' of each other's section before approving it. They also deliver continuing education for the team throughout the year in myriad formats.

CTOs receive in house training based on California POST requirements. This position receives a 5% (continuous) increase in rate of pay for performing CTO duties.

8.1.1 New Employee Training

All HCC new employee training is conducted in house. It consists of a combination of classroom training (when staffing permits), followed by practical/hands on "at the workstation" training with a training officer. All entry-level Call-Takers and Communications Operators are required to attend a 3-week, 120-hour POST Basic Public Safety Dispatcher Academy within one year of employment. POST training takes place off-site at the POST facility. Supplemental agency-specific training takes place in the police training facility located on the 3rd floor adjacent to the HCC.

8.1.1.1 Call-Taker Training

All newly hired staff begin with a one-week city orientation. In the event there are enough trainees and staffing in the HCC permits to hold an academy, the classroom training is 3-5 days. The academy consists of CAD training, city geography, mapping, and dealing with difficult callers. Information not covered in the classroom is in the Training Manual. Call-type testing and geography testing has been developed but is not always utilized. When classroom training is complete the trainee 'shadows' the call-taker position. There is a 'test' CAD and radio channels available for simulation training, however, there is no staff available to utilize it as part of the training academy. The CTO uses the test CAD for scenarios during down time on the floor and uses a 'checklist' to ensure all concepts are covered. Call-Taker training usually takes 2-3 months, depending on the trainee.

Training primarily takes place at the workstation, where the trainee is expected to follow along with the technology use, procedure, and call-taking practice and process. The HCC receives more than 800 calls for service each day; there are many interruptions during the learning process for new recruits while they grapple with not only the technical precision and procedure required to perform the tasks, but also the enormity of responsibility that a 9-1-1 professional is tasked with. Often new recruits come with little or no previous public safety communications training, education, or experience. This is their first exposure to the profession, and it can be overwhelming.

Should training extensions be required, new hires are supported through a performance improvement plan to identify and prescribe action steps necessary, track progress, and meet to review.

If the recruit was hired as a Communications Operator, they will move on to learn the dispatch training portion of the role. It was noted by several interviewees that often the call-taking portion seems to be rushed to move them onto the dispatch training quicker.

8.1.1.2 Dispatch Training

Once call-taker training is completed, staff hired as Communications Operators will move into Fire Dispatch Training which is completely shadow based training and lasts approximately two months, at which point the trainee will then move to Police Dispatch training.

In the case where there is more than one Communications Operator hired at the same time and more than one is assigned to the same team, one will be assigned to fire dispatch and the other to police dispatch. Each will spend time learning the respective role for approximately two months, at which time they will switch and learn the other dispatching discipline. Everyone follows the same path – Call-Takers go through basic call-taker training. Communications Operators go through call-taking basics, fire dispatch, service channel (com3), police channel (com1), and then shadow in the final phase of their training.

Once the trainee is signed off from dispatch training, they are assigned shifts, and if full time, assigned to a team. Understanding that the learning continues for a long duration after a recruit has been approved to work on their own, there is always nearby coaching/mentoring in the center for them as needed. They receive continued mentorship over the next several months, including regular quality assurance call reviews and feedback for the first six months they are signed off. The CTO or Supervisor will meet with the trainee regularly to review QA evaluation and offer positive feedback while highlighting areas for improvement.

8.1.2 Observations for New Employee Training

The retention and success rate of learning all components of the position "at the desk" while on the job, combined with the high call volume, high stress environment, and number of tasks performed in a short time frame, is overwhelming to new staff who have not yet learned all of the pieces of the job individually, in a non-live, lower stress environment. This can make it difficult to successfully follow along, put the tasks and learning together quickly in one setting, and correctly retain and recall the skills they are trying to learn. This leads to poor retention of information, lack of confidence, frustration in both the trainer and the trainee because they "aren't getting it;" this can significantly contribute to higher turnover.

The costs of recruiting and training are high; a lack of training in a format and environment that is conducive to good learning is likely not only costing money and time in the recruiting and training process, but increasing risk in call-taking and dispatch; adding additional strain to staff in the HCC who cover absences when there are staffing shortages, support the additional call volume in the center when new recruits are being trained, and assist with helping to further development new recruits once they are signed off. Overall, it can contribute to lower morale, lower job satisfaction, increased workload, stress and absenteeism and illness, creating a continued cycle of these conditions and a difficult work environment.

8.1.3 Continuing Education

At minimum, continuing education must include 24 hours of POST approved courses every 2 years for each employee, as mandated by the State POST program. Currently, staffing capacity does not permit scheduled training days for each employee. This makes it difficult to plan and attend training. However, as it is POST mandated, it must be attended to and almost always requires overtime to back fill staff that are sent for training.

Other continuing education initiatives are administered by the Communications Center Administrator with support from the CTOs. Each month a training topic is rotated through each team in the Center. This topic usually results from a gap noted by the Communications Administrator, or a change in policy or procedure, or as identified as a topic of interest from Supervisors and frontline staff.

HCC does not have a separate training budget assigned specifically to them; their training budget is part of the overall Police training budget.

8.1.4 Supervisor Training

Supervisors attend the state Supervisor training through POST. Some have also attended the Center Managers Certification Program (CMCP) training through NENA. There is no formalized Supervisor Training, Staff stated it is 'learn as you go.' Supervisors stated if they do not know what to do, they simply call the Communications Administrator even if it is 0300 hours as there is no procedural manual. There is a Resource List that is utilized when assistance is required but is not a fully exhaustive list or a comprehensive Supervisor manual. Interviewees provided an example of a supervisor that had an Officer Involved Shooting (OIS) on the shift and did not know the HCC responsibilities during the incident.

CTOs are often utilized as an acting Supervisor as CTO status provides a continuous 5% wage increase.

CTOs are certified through POST. Currently there are Staff that are 'approved' as CTOs and awaiting training.

8.1.5 Recommendations

That HCC implement a training program that includes:

- A recruit training classroom component to cover area familiarization, call-taking and dispatch theory and protocol training, review of policy and procedures, training on HCC technology and process, and a simulation lab that allows them to practice tasks in a non-live environment. Classroom theory and simulation training should occur prior to the practical "at the desk" training component.

- A designated training room/classroom be dedicated to HCC and equipped with the furnishings and technology to support simulation-based training.

- A recruit training practical component with an assigned coach/mentor who has been certified as a Communications Training Officer as per the standards outlined below.

- Updated policy and procedures that include step by step process for job tasks in the HCC.

- That continued education and professional development be included in the program, and that HCC staff participate in joint training initiatives between fire, police, and the HCC.

- That a supervisor training program be implemented where potential supervisors are trained and mentored for the role well before they are promoted, and that continuous leadership development occur throughout their tenure.

- That continuing education and professional development training be treated as priority, and that efforts are made to regularly schedule training days (as soon as staffing levels permit).

That the training program adheres to industry standards and any person creating or delivering training be certified to do so as per:

- NFPA 1225 (2022) Chapter 7: Public Safety Communications Training Officer (NFPA 1061) and Chapter 10: Public Safety Communications Training Coordinator (NFPA 1061)

- APCO ANS 3.108.2-2018 Core Competencies and Minimum Standards for Public Safety Communications Instructor

- APCO ANS 3.104.2-2017 Core Competencies and Minimum Standards for Public Safety Communications Training Coordinator; and

- APCO ANS 3.101.3-2017 Core Competencies and Minimum Standards for Public Safety Communications Training Officer (CTO)

8.2 Quality Assurance and Quality Improvement

There is a quality assurance program in the center. Supervisors complete an in-house created evaluation form that measures call-taker and dispatcher actions for calls against existing policy and procedure.

Supervisors complete a set number of reviews per month, per staff member. One medical and one police call are reviewed for each Dispatcher and three police (P1, P2, P3) and one medical call are reviewed for the Call-Taker position. They are scored using an evaluation system consisting of unsatisfactory, needs improvement, meets standards, exceeds expectations. These ratings are color coded for quick review and are saved electronically. Individual QA Reports are used for the bi-annual performance reviews. Calls are chosen as random as possible, with no call being too close in dates to the other. Each evaluation is shared in confidence with the staff member being evaluated usually via email. The supervisor meets with staff members for an in-person review with those who fall below the compliance level, to provide feedback and to plan any additional support, training, or remediation that the staff member may require. High compliant evaluations do not warrant an in-person meeting and are left at sharing with the specific employee via email.

The QA program findings are not used to inform the training program at this time. It should be noted that the evaluation form and remediation process are currently being redesigned.

8.2.1 Recommendations

The APCO/NENA standard recommends that HCC's review at least two percent of all calls for service, unless that number would be overly burdensome to an organization.

It is recommended that the QA/QI activities receive a higher priority and that QA/QI reviews are consistently delivered using dedicated staff to oversee the program. Given the size of HCC, and the number of staffing it will be increasing to, *FE* recommends a full-

time resource, such as a QA/QI Coordinator (see next recommendation) to provide oversight of the program, conduct the reviews, e.g., discussion with staff, document the findings of the reviews, and maintain the program.

Create a Quality Assurance / Quality Improvement and Training Support Coordinator position. This role can lead QA/QI program and support the Administration Supervisor with the HCC Training Program. QA/QI and training roles are tightly interconnected; quality assurance data informs both training and quality improvement needs, training requirements inform quality assurance measurements and support improvements.

In a center the size of HCC, with the amount of staffing increase, it would be ideal for one person to fulfill this role and that it be separate from the Administrative Supervisor position who would oversee the overall HCC training program. While it may be necessary for one position to provide both QA/Qi and training roles until staffing levels increase, the volume of QA & QI necessary, along with the training to support improvements for a staff of 60+ is significant. In particular, half of the staff in HCC will be new and require more training and support in their initial few years, which will stretch the capacity of having the roles combined long term rather than two separate positions.

Additionally, succession planning for this position can be created through staff members who identify training and quality assurance as areas of strength or interest in their career path. They can also receive quality assurance and communications training officer certification and assist with supporting workload and projects, be mentored by the QA/QI and Training Supervisors and have the opportunity to fill in for this role when absence dictates.

Alternatively, if a commercial protocol system is implemented, this position could be filled by an experienced employee from another agency who is already certified, trained and familiar with that particular program. Hiring staff with prior experience in implementation and CAD integration would significantly expedite the development of the QA/QI program.

As an interim measure, QA/QI support could be contracted to a qualified third-party provider until staffing levels permit filling the role internally.

Qualifications for this role and for creating a quality assurance, quality improvement, and training program can be informed by the following standards:

- NFPA 1225 (2022) Chapter 9 Public Safety Quality Assurance/Improvement Personnel (NFPA 1061)

- APCO/NENA ANS 1.107.1.2015 Standard for the Establishment of a Quality Assurance and Quality Improvement Program for Public Safety Answering Points

- APCO ANS 3.108.2-2018 Core Competencies and Minimum Standards for Public Safety Communications Instructor

- APCO ANS 3.106.2-2017 Core Competencies and Minimum Standards for Public Safety Communications Quality Assurance Evaluators

- APCO ANS 3.104.2-2017 Core Competencies and Minimum Standards for Public Safety Communications Training Coordinator

- APCO ANS 3.101.3-2017 Core Competencies and Minimum Standards for Public Safety Communications Training Officer (CTO)

A pathway to achieving accreditation is possible through:

- Standardized call-taking and dispatch protocol

- A well-designed QA/QI program with consistent call review and constructive feedback to staff

- Identifying and celebrating successes and high performance

- Identify trends and gaps in training

- The delivery of quality and regular training and professional development

Accreditation is highly attainable and sustainable once HCC has the staffing, resources, and support to carry out the recommendations in this section and others.

9. Technology

9.1 Computer Aided Dispatch

Computer-aided dispatch (CAD) is a critical system that assists call-takers and dispatch personnel in processing, prioritizing, dispatching, and controlling calls for service for their respective emergency service agencies. CAD systems typically consist of several modules that provide call input, unit recommendations, call dispatching, call status maintenance, mapping, event notes/narrative, field unit status and tracking, and call resolution and disposition. Computer-aided dispatch systems also include interfaces that permit the software application to provide other critical features and functionality, such as links to external databases.

The Hayward Communications Center originally installed and went "live" with their Tyler Technologies CAD system in January 2012. The current software version is 2021.1, hot fix 3, that was installed in December 2021. The city is using a virtual server environment, with a Windows Server 2016 server operating system, and the workstation operating system is Windows 10. They do have a redundant back-up server configured, as well as a test server which can be utilized to test and train on CAD.

The system is capable of a multi-jurisdictional and multi-discipline configuration, but is currently only configured for a single municipality, the City of Hayward. It is provisioned for a multi-discipline operation since the HCC dispatches both City Police and the City Fire services. The CAD system is configured and used to provide recommendations for both police and fire. The system is using CAD event numbers and agency specific incident numbers.

The city has indicated that the system is NG9-1-1 ready.

9.1.1 CAD Discipline Modules

The HCC operates with two CAD system modules, law enforcement and Fire/EMS. When a multi-discipline event is received and input, the software system generates two pending calls for service – one for law enforcement and one for fire. Most current CAD systems are capable of being configured as either two or three modules, but operationally, most communications centers are only configured for two. EMS units and associated functionality are built within the fire module. The only time it would be beneficial for three is when there are separate fire and EMS dispatchers and agencies and/or EMS is dispatched by another communications center. In those cases when a multi-discipline

event is generated, it could automatically spawn three CAD events, one for police, one for fire and the third for EMS.

9.1.2 CAD Interfaces

The following table lists typical interfaces found within public safety communications CAD systems and the status of those interfaces in the City's Tyler CAD system. The response 'Yes' indicates that the module exists, and the city is utilizing that interface or module. The interfaces or modules listed in the table with a 'No' response simply means the system is capable of the interface, but the city has elected not to buy or use that interface for operational or security reasons.

Table 20 – Interfaces

HCC			
CAD Interfaces	**Yes/No**	**CAD Interfaces**	**Yes/No**
9-1-1 ANI/ALI	Yes	Master Clock	Yes
Alarm Monitoring	No	Mobile Mapping	Yes
Alarm Tracking and Billing[3]	Yes	Phase 2 Wireless Mapping	Yes
ASAP Alarm Company	No	Police Field Reporting	Yes
Automatic Vehicle Location	Yes	Police Mobile Data	Yes
Call-Taker/Dispatcher Mapping	Yes	Police RMS	Yes
Corrections Management Software	Yes	Radio Console: PT and Emergency	No
Logging Recorder	Yes	Rip & Run Printers	Yes
Email/Text Paging	Yes	Routing/Directions	Yes
Emergency Medical Dispatch (EMD)	No	Staffing Module	No
EMS Mobile	No	State/NCIC	Yes
EMS ePCR	Yes	TDD/TTY	No
Fire Mobile	Yes	Tone Alerting (radio voice paging)	Yes
Fire RMS	Yes	Pictometry	Yes
Fire Station Alerting	Yes	Web CAD	Yes

9.2 Recommendations

Hayward Fire is an ALS service that responds to all medical calls in the city to assess and treat patients and provide on scene support until EMS can arrive to take over. Today, all 9-1-1 calls for medical assistance are transferred to ACRECC for provision of Emergency

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[3] Alarm Tracking and Billing interfaces exist in the system but are not utilized.

Medical Dispatch call-taking and dispatch once HCC call-takers obtain address, phone number, patient complaint and sex/age. Once the calls are transferred, there is no further communication between HCC and ACRECC to provide patient status updates or further call details, except in cases where scene safety issues are present. In those cases, ACRECC will phone HCC directly to provide information. This information is passed along verbally, and the dispatcher manually enters the information into the call in CAD. There is no electronic transfer of call information.

- *FE* recommends that HCC work with ACRECC to implement a two-way CAD-to-CAD interface between HCC and ACRECC for medical call information sharing. Medical call information can be provided seamlessly and electronically through CAD to HCC Fire Dispatchers, while simultaneously transferring to Mobile CAD where responding fire personnel receive real time call updates and patient information.

- This interface becomes important as well, when HCC implements medical call-taking, so that ACRECC can receive medical call information electronically and efficiently to dispatch EMS, without HCC having to ever transfer the call over or pick up a phone to relay information.

A CAD-to-CAD interface reduces the risk of error in data entry and automates the call sharing of information in an efficient and effective manner, benefiting HCC, ACRECC, responders, and ultimately the patients and public.

9.3 Mapping/GIS

The City is using GIS/mapping data that is provided by the City's mapping, property information and GIS staff who are part of the Information Technology Department. The City GIS is using an Esri ArcGIS enterprise geodatabase solution, version 10.6.1. The Esri GIS data is imported for use with the Tyler CAD and mobile mapping systems.

The City's GIS data includes the required address points, street centerlines, administrative boundaries, and emergency response zones for the City and adjacent Fairview. The GIS/mapping data is updated monthly. The data is not limited to the city, so it does include some surrounding municipalities, but it does not include the entire County.

The City does have the required GIS data needed for NG9-1-1. This includes street centerlines, address points, administrative boundaries, and emergency services

boundaries. The data meets local requirements, but it does not currently adhere to the NENA NG9-1-1 GIS Data Model[4].

The city does have some limited data for their neighboring areas, and this is used for responses to mutual or supplemental aid areas outside the city.

9.4 Mobile Data Devices

Mobile Data Devices are used by the dispatched agencies to provide connectivity and communications with the computer aided dispatch system. MDD functionality includes the ability to provide silent dispatch (dispatched event data and notification), status changes, automatic vehicle location (AVL), directions, routing, messaging, mobile mapping. For law enforcement it also provides field-based reporting functionality and the ability to query databases, such as CLETS/NCIC/RMS.

The city is using Tyler Technologies mobile data solution, integrated with the CAD application. The mobile solution was initially installed in January 2012, and last updated in December 2021 with version 2021.1. The mobile server operating system is Windows Server 2016 and is located at the City Police headquarters. The Fire Department is also using the same mobile data application, however with a different user interface developed for fire operations.
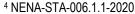
There are approximately 60 law enforcement mobile computers in the field.

The connectivity from the mobile devices to the mobile server is achieved using Verizon and AT&T commercial wireless air cards. The city is also using NetMotion software which provides a secure mobile VPN connection and assists with traffic optimization by maintaining or resuming connectivity for the mobile devices in any areas with poor coverage.

The city is not using any CAD/RMS integrated hand-held applications.

9.5 9-1-1 Answering Equipment

The HCC is the primary PSAP so 9-1-1 calls are routed directly to them by their 9-1-1 Service Provider. The communications center is using Motorola Solutions VESTA Call Handling Equipment (CHE). Calls for police and fire services are processed by a city call-taker who answers and then processes that event for dispatch. Calls that require a medical services response are transferred to ACRECC. All 9-1-1, ten-digit emergency

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[4] NENA-STA-006.1.1-2020

and non-emergency lines are installed, configured, and answered on the VESTA answering equipment.

The current VESTA equipment is Phase II compliant, capable of rebids and can display a Wireless Phase II caller's location on the answering equipment's mapping system. The system is interfaced to the Center's Verint logging recorder. The 9-1-1 answering solution does include a VESTA management information system (MIS) for telephone statistics.

The center has a web-based Text-to-9-1-1 solution provided by ComTech that was implemented in February 2018. The city is planning to replace this system with a new Rapid Deploy solution at some point in the future.

There is a CAD interface to the 9-1-1 answering equipment that allows ANI/ALI data to be transferred for CAD event entry. The interface does provide the display of Wireless Phase II data and the callers location on the CAD map. The city has six 9-1-1 lines.

9.6 Logging Recorder

The Hayward Communications Center is using a Verint logging recording system to record the police talk groups and the telephone system. The recorder was originally installed in 2015 and last updated in 2021. It has a twelve-channel capacity and currently records two radio channels and all the 9-1-1 answering positions. The recorder is under a support and maintenance contract through Capture Technology. The recorder is capable of recording analog and digital conversations.

A NICE Inform recorder is being used to record the Hayward City Fire Department talk groups. The NICE logging system is maintained by the Alameda County Sheriff as part of the East Bay Regional Communications System Authority (EBRCSA).

9.7 Emergency Notification System

The HCC is using an Everbridge AC Alert cloud-based emergency notification system. This is a stand-alone system and not interfaced to the 9-1-1 telephony system or the CAD system.

9.8 Emergency Dispatch Protocols

The Center is not currently using any third-party emergency dispatch protocol software applications or flip cards.

9.9 Radio Dispatch Consoles

The police and fire departments are both operating on the East Bay Regional Communications System (EBRCS) Motorola P25 compliant 700/800 MHz radio system. The system was engineered with six cells and a total of 36 radio sites. The system can provide fully interoperable communications to all public agencies within the counties of Alameda and Contra Costa.

The communication center is using Motorola MCC7500 radio dispatch consoles, installed in 2016 and last updated in 2021. The current operating system is Windows, and the workstations are five years old. The system is capable of emergency button activation and push to talk ID. The city is working with the EBRCSA Board of Directors to install encryption onto the system. The dispatch consoles are owned by EBRCSA and are provided to the city as a subscription cost.

There is no CAD interface to the radio dispatch consoles. The city is planning to implement a Locution PrimeAlert Responder system in the fall of 2022.

The city uses sixteen channel Motorola APX (dual band & all band) radios utilizing the EBRCSA interoperability matrix. The system provides interoperability for Alameda, Contra Costa, and portions of Solano County. The Fire Departments back up channel is the city owned UHF channels. Tertiary to that, the city utilizes VHF.

The following is a list of the primary talk groups or radio channels in use by the HCC for police dispatch.

Table 21 – Primary Dispatch Talk Groups - Police

Hayward Police Department	
Description	**Dedicated Dispatcher**
Comm 1	Yes
Comm 3	Yes

Comm 1 is used as the primary operating radio channel among all police units. Comm 3 is used as the inquiry, information, and service radio channel for police units. If there is an incident that requires tactical dispatch (pursuit, cordon/perimeter work, etc.), that call will remain on Comm 1, and all other active calls will be instructed to move to Comm 3.

The following is a list of the primary talk groups or radio channels in use by the HCC for fire dispatch.

Table 22 – Primary Dispatch Talk Groups - Fire

Hayward Fire Department	
Description	Dedicated Dispatcher
Dispatch	Yes
Command	Yes

Dispatch is the talk group where units are dispatched and conduct their primary operational radio traffic. Command is used as a tactical channel when required for major incidents such as structure related events, hazmat incidents, etc. Both talk groups are managed by one communications operator who is dedicated to Fire Dispatch.

At times when there is a tactical incident that requires dedicated communications operator support, other communication operators on duty will assist with any other active fire calls.

9.9.1 Interoperability

The communications center has radio interoperability via the regional radio system to:

- All fire agencies in Alameda, Contra Costa, and some in Solano County

- 9-1-1 Ambulance Services in Alameda County

- Bay Area Rapid Transit (BART) for fire communications

9.10 Law Enforcement Records Management System (LERMS)

The law enforcement records management application provides functionality to manage data for incidents, cases, personnel, equipment, and other department actions. The system is interfaced to the CAD and mobile data system enabling data entered during event creation to be transferred to the appropriate LERMS incidents.

The LERMS module allows users to generate reports for crime analysis, management reports/presentations and retention. The system provides several pre-formatted reports or allows the agency to configure their own ad-hoc reports. The system tracks the investigation and case status.

The Hayward PD is using Tyler Technologies New World Law Enforcement Records Management System (LERMS). The system was installed in January 2012. The current

software version is 2021.1. The system was last updated in December 2021, the server operating system is Windows Server 2016.

The law enforcement application provides functionality to manage data for incidents and cases. The system is interfaced to the CAD system, enabling data entered during event creation to be transferred or imported into the appropriate LERMS incidents.

HPD are using Tyler's field-based reporting module and the system is using automated functionality to ensure accurate UCR reporting. The agency is currently working on migrating to NIBRS reporting. The law records module includes case management functionality for the tracking of cases from the time they are created until they are closed.

This module also provides the ability to input warnings or alerts on people entered as an officer safety feature.

9.11   Fire Records Management System (FRMS)

The Fire Records Management System (FRMS) module provides fire users with various tools to report, track, and manage everyday department events. The Fire Department is required to track records around fire incidents, patient care, personnel, training, certifications, equipment, etc. Modern systems include tools to help provide robust reporting and analytics, allowing the command staff to take a deeper look into how the department is performing, personnel information, how many incidents they responded to, and the type events.

The Hayward Fire Department is using ESO's fire records management system. The system was installed in October 2021 and was expanded to accommodate a fire reports module. The fire records system is interfaced to the CAD system allowing event and unit data to be automatically transferred to the FRMS.

The following modules are available for ESO FRMS:

- Activities
- Alerting
- Analytics
- Asset Management
- Checklists
- Incidents
- Inventory
- Hydrants

- Personnel Management
- Permits
- Property and Inspections
- Scheduling

The HFD also uses ESO software for electronic patient care reporting (ePCR), which was installed in 2011 and last updated in 2017.

9.12   Facility

The HCC is housed in the Police Administration Building. Employee parking is in an open-air parking lot adjacent to the building. Building access is controlled by an electronic access control system (magnetic/key card); there is also a numeric keypad lock to gain access to dispatch.

There is a lunchroom for communications staff that is directly accessible off the dispatch center floor. The employees share a workout facility with other police department sworn and civilian employees. There is no quiet room. The Administrative Communications Supervisor has a desk / cubicle in the corner of the room but no private office space for supervisors to meet or coach employees.

The following table depicts a high-level overview of systems and equipment installed in the center's equipment/server/data rooms.

Table 23 – Data/Equipment/Server Room

Data / Equipment / Server Room	
Description	**Response**
PSAP Size:	1600 SF
Back-up Generator:	Yes
Generator Make/Model:	Cummins Onan
Generator Size:	350 KW
Generator Installed	1993
Generator Fuel:	Diesel (2,000 gallon)
Generator Tested:	Monthly (2 hours)
Electrical Service Provider:	480/277v - 2000-amp
Electrical Service Level (amps)	Yes
Telephone Geographical Diverse Entry:	Yes
Fiber Installed:	Yes

Data / Equipment / Server Room	
Description	**Response**
Climate Controlled:	Proximity Keycard - Phone Room is locked
Room to Install New Equipment (expansion):	1600 SF
Security	Yes

9.12.1   Observations

The HCC currently has nine workstations installed in the center. There is limited space within the center to reconfigure the set up or add additional workstations. With the increase of recommended staffing levels to support HCC operations, additional space to install more workstations will be necessary.

There is no training facility with HCC technology or workstation capability available. While there is an assembly room immediately next to the HCC, it is not meant specifically for HCC use, and is booked for various meetings and training by other divisions in the department.

There is no space assigned for supervisors to use for one-on-one coaching and discussion with their team members.

There is no quiet room available for staff where they can decompress alone after a difficult call or take a rest break without interruption when necessary.

9.12.2   Recommendations

FE recommends:

- A redesign/reconfiguration of current set up in the HCC to add more workstations for additional staffing. Optimal staffing levels are ten employees per shift, currently there are only nine workstations in the center.

- A training room with workstations and HCC technology – CAD, phone, radio, is necessary for recruit training/classroom academy training.

- Secure a new location or existing facility for a purpose built (or renovated) Emergency Communications Center that serves the unique needs of Public Safety Communications personnel, infrastructure, and technology. It should be designed to suit current needs and support growth into the next 20-30 years and adhere to industry standards and best practice.

9.13   Back-up Center

The Hayward Communications Center does not have a local back-up center. They depend on two adjacent centers to provide their back-up: Alameda County Sheriff's Office and the Fremont/Union City 9-1-1 Center. In the event the center would experience a critical failure, they would contact Lumen to assist with rerouting the City's 9-1-1 calls to either the County SO or the Fremont/Union City 9-1-1.

The City's police and fire dispatch function could only resume after staff relocate back to the center and Lumen is contacted to reroute their 9-1-1 calls back to them.

9.13.1   Recommendations

Backup centers are critical infrastructure in Public Safety Communications. Every HCC should be equipped with one and it should be mission ready at a moment's notice. There is no back up facility in existence for HCC today. There is a mobile command post that can be activated for HCC staff to work out of, but this does not serve well as a medium or long-term use facility and does not have the same operational capability as the HCC. It could be used as a very short-term facility to bridge the gap between moving from the primary HCC to the backup site.

FE recommends that a backup center is implemented for HCC. Every means possible should be made to ensure adequate contingency plans and facilities are in place without delay, particularly due to the high-risk major fault line/earthquake area that City of Hayward is located within. Considerations should include, but not be limited to, the following:

- Determine spatial, infrastructure, and facility needs for a Backup site; identify and secure a location.

- Install the appropriate number of workstations and technology to have the Backup facility function as close to regular operational capacity as possible. Ideally, this would be a mirrored center, with the same number of workstations, technology, and operational capability as the primary center. It should be set up to function in parallel with the primary center at any time, allowing it to be used as an overflow or special operations center, as well as for contingency and evacuation purposes.

- Ensure an up-to-date business continuity plan exists for HCC and that it is understood and practiced (regular drills) by staff.

- Ensure that it is in accordance with industry standards for Backup facilities and business continuity such as NFPA 1225 (2022) Chapter 12 - 12.2 General requirements which state:

    o 12.2.1 - Communications centers and alternate communications centers shall comply with Chapter 12.

    o 12.2.2 - A comprehensive emergency management plan (CEMP) shall be in place for each communications center.

    o 12.2.2.1 - The CEMP shall comply with the applicable requirements of the NFPA 1600, and additional requirements specified in this document.

    o 12.2.2.2 - The AHJ (authority having jurisdiction) shall review the CEMP for currency and applicability annually.

    o 12.2.4 - Communications equipment shall be kept in working order at all times.

    o 12.2.5 - Each center shall be provided with a designated primary means of communication that shall be compatible with the designated primary means of communication provided at Emergency Response Facilities (ERFs).

    o 12.2.5.1 - Each center shall be provided with an alternative means of communication that is compatible with the alternate means of communication provided at the ERFs.

    o 12.2.5.2 - The alternate means shall be available to the telecommunicator in the event of failure of the primary communications system.

    o 12.2.6 - Each jurisdiction shall maintain an alternate communications center that meets the criteria in 12.2.6.1 and 12.2.6.2

    o 12.2.6.1 - The alternate communications center shall be capable, when staffed, of performing the emergency functions performed at the primary center.

    o 12.2.6.2 - The alternate communications center shall be separated geographically from the primary communications center at a distance that ensures the survivability of the alternate center.

    o 12.2.6.3 - Each jurisdiction shall develop a formal plan to maintain and operate the alternate communications center.

- o 12.2.6.3.1 - The plan shall include the ability to reroute incoming event and alarm traffic to the alternate center and to process and dispatch events at that center.

- o 12.2.6.3.2 - The plan shall be included in the CEMP.

- o 12.2.6.4 - When operations are from the alternate communications center, receipt, transfer, processing and dispatching of alarms and events in accordance with the requirements of this standard shall not be dependent on the functioning of any equipment at the primary communications center.

- o 12.2.7 - The communications center shall be capable of continuous operation long enough to enable the transfer of operations to the alternate communications center in the event of a dire or other emergency in the communications center or in the building that houses the communications center.

10. Financial Analysis/Projected Cost Estimates

The following is a high-level financial analysis and projected cost estimates for the HCC recommendations included in this report. As indicated in Section 4: "High Level Strategic Implementation Plan" *FE* recommends that Hayward organize a project task force team immediately to carry out the strategic plan to address the immediate critical needs.

This team can conduct analyses on best methods (including cost/benefit where appropriate) to achieve recommendations. Below is a high-level project cost estimate of the recommendations. There are decisions that must be made first, so that further information can be attained for a deeper analysis of costs.

Table 24 – Financial Analysis & Projected Costs Estimates

Category	Term	Comments	Cost Estimate
Staffing	**Short**	Increase of 20-39 employees; cost estimate based on average salary plus benefits & admin support	$4M-$7.8M/yr.
Training	**Short**	Expand/Augment current training program by adopting industry available entry level (basic) for new recruits. The adoption of a core competencies in an on-demand / on-line training format reduces basic introductory in-house training.	$15K/yr.
		CTO training targeting new and seasoned instructors including presentation skills, adult learning styles, human relations. Note that this effort does not include wages, time off, or special compensation germane to the delivery and participation in HCC personnel training.	$25K
		Supervisory training geared specifically to HCC supervisors that is ECC specific. This training to include human relations, negotiation skills, intervention, skills, QA/QI methodologies, etc.	$25K
Protocol Implementation	**Short**	Implementing structured protocols for Emergency Medical Dispatch & Emergency Fire Dispatch; includes costs for QA/QI system software	$250K
Technology	**Medium**	Conversion of existing workspace to create a dedicated training facility complete with	$500K

Category	Term	Comments	Cost Estimate
		operational workstations configured to augment spikes in HCC call processing.	
		Design and implementation of CAD-to-CAD interface with ACRECC.	$250K+
Facilities Expansion	**Medium**	Expand current HCC footprint to allow for the increase in call-taking & dispatch consoles; designate office space for quiet room & supervisors office	$700K
Backup Facilities	**Medium**	Creation of off-premises fully functional backup facility that would serve as an Emergency Operations Center (EOC) as well as a training venue.	$1M+
Pilot Programs Assessment	**Short**	Establish dedicated project management resource team to assess and evaluate short and long-term progress of pilot programs.	$200K/yr.
Implementation Plan	**Medium**	Establish administrative & analyst team to monitor HEART mental health response strategies and outcomes. Includes additional staff such as data analyst and an additional FTE, so that current Coordinator is not managing two distinct roles. Costs are estimated to cover additional administrative program oversight personnel, along with technology and software to support streamlined data input, collection, and analysis. These costs do not include existing frontline and leadership personnel who are already running the program.	$700K/yr.
New PSAP Facility	**Long**	Establish a stand-alone PSAP facility. Governance & oversight under a new city department with functional oversight provided through the collaboration of police and fire. Facility would function as an EOC, regional training facility, press & media briefing rooms, etc.	$10M+