



Santa Barbara County

**Public Safety Dispatch Center
Findings and Alternatives**

July 12, 2017



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Mona Miyasato
County Executive Officer
County of Santa Barbara
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Santa Barbara, California 93101

Dear Ms. Miyasato:

DELTAWRX is pleased to present this report of our Findings and Alternatives for the Santa Barbara County Public Safety Dispatch Center. This report is based on information we have gathered through interviews with County stakeholders, our observations of dispatch operations and our review of available documentation and previous reports. As requested, we have analyzed two alternatives for improving dispatch services within the county and have identified the advantages, disadvantages and costs of each, along with our recommendations for implementing each alternative.

By implementing the recommendations associated with one of these alternatives, we believe that the public safety dispatch services in Santa Barbara County will be better positioned to support the needs of emergency medical services (EMS), fire and law enforcement personnel, which will improve the delivery of public safety services to the citizens of the County.

We wish to thank all of the project participants for the cooperation and input we have received during this study and we look forward to working with the stakeholders to implement the recommendations that are selected.

Very truly yours,

Michael P. Thayer
Partner

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Section 1 – Executive Summary

Since 1977, the Santa Barbara County Sheriff's Office has provided public safety dispatch services for Emergency Medical Services (EMS), Santa Barbara County Fire and the Sheriff's Office through the Public Safety Dispatch Center, which is one of six Public Safety Answering Points (PSAPs) in the county. The Sheriff's Office manages and provides all of the employees for the county's dispatch center and receives reimbursement for dispatch services from the county's EMS provider American Medical Response (AMR), the City of Guadalupe and County Fire.

Over the years, various initiatives and studies have been undertaken to analyze the dispatch center and its operations, review costs and cost sharing methodologies, and provide recommendations to improve the services the center provides to first responders and Santa Barbara's citizens and visitors. These efforts were conducted primarily at the request of the county's Fire Department, which has had longstanding concerns about the level of services it receives from the Sheriff's Department and the cost of those services. The Emergency Medical Services (EMS) Agency shares many of the Fire Department's concerns and has additional concerns about the efficiency and effectiveness of the pre-arrival instructions provided to callers in need of emergency medical dispatching services.

Each of the previous initiatives has produced recommendations to improve dispatch operations, provide better cost accounting for dispatch services and/or enhance the management of the dispatch center. While changes have been made within the center over the years, and changes continue to be made, EMS and Fire continue to be dissatisfied with the overall level of service and accountability they receive from the dispatch center.

To address the ongoing concerns of EMS and Fire, DELTAWRX was engaged to take a fresh look at the dispatch center operations and provide alternatives for the improvement of dispatching services. In this report, we provide an overview of the project, a description of the dispatch center and the current environment, a review of the issues identified by stakeholders, two alternatives to improve the delivery of dispatching services to the county's first responders and the estimated costs to implement each alternative. Below, we summarize our findings and the two proposed alternatives.

1.1 Overall Findings

Section 4 contains our high-level findings regarding the county's current public safety dispatch center. While the findings are not intended to be an exhaustive list of all issues that were identified during the study, it includes those issues that we consider most important to the future success of the dispatch center. The findings, which are fully described in Section 4, are as follows:

- Dispatch Center Staff Members Are Dedicated and Hard Working
- The Dispatch Center Is Rarely at Full Staffing Levels
- Supervisors Are Often Relied Upon As Dispatchers

- EMS and Fire Do Not Share Executive Oversight of the Dispatch Center With Sheriff
- There Is Limited Continuity in the Executive Management of Dispatch Center
- The CAD System Is Not Being Fully Utilized and Has Limited Expert Support
- There Is Limited Backup for the County's Existing Dispatch Center

While many of these issues have been identified in the previous dispatch center studies conducted for the county, the issues still remain. The current management team has taken some action, but significantly more must be done to resolve these issues.

1.2 Alternative 1: Optimize Current Operation

Section 5 contains the initial dispatch alternative to be considered, which is to optimize the current dispatch operation. This alternative involves maintaining the dispatch center in its current form as a primary public safety answering point (PSAP), with dispatch services being provided to EMS, Fire and the Sheriff's Office. This approach is common for public safety dispatch centers and has worked effectively in jurisdictions as diverse as Albemarle County, Virginia; Deschutes County, Oregon; Monterey County, California and Ramsey County, Minnesota.

The consolidated multi-discipline dispatch center is consistent with the general trend towards regional consolidation in dispatch services and offers economies of scale and operational efficiencies for public safety stakeholders. In consolidated dispatch centers, a 911 caller only has to talk to a single person and does not need to be transferred to another PSAP for a fire or EMS response. Likewise, when EMS, fire and law dispatchers are in the same facility, it can be easier for the dispatchers to coordinate the response for larger incidents that require a variety of public safety resources.

However, operating a multi-disciplinary dispatch center presents challenges as well. In centers where individual dispatchers work each discipline (such as the Santa Barbara County PSAP), dispatchers must be fully cross trained and competent in the procedures and operations of EMS, fire and law enforcement. While this provides the center significant flexibility in staffing and dispatch coverage, some feel that, due to the complex and diverse nature of law and EMS/fire responses, it is difficult to become and remain fully competent in all disciplines. Additionally, County Fire feels that the background check requirements necessary for dispatchers in a law enforcement environment eliminates some candidates who could be effective EMS/fire dispatchers, which exacerbates the problems of recruiting and hiring personnel in the center.

To improve dispatch operations in Santa Barbara County while retaining the current dispatching model, we recommend the following actions, which are more fully described in Section 5:

- Form a Multi-Disciplinary Executive Oversight Group
- Replace Sheriff's Commander with Civilian Executive Director

- Develop a Multi-Year Budget for the Dispatch Center
- Create a New Position for E9-1-1 Call Taking
- Combine EMS and Fire Dispatch Function
- Revise the Approach for Training Dispatchers
- Provide Additional Technical Resources for CAD System
- Explore the Creation of a Backup Dispatch Facility

1.3 Alternative 2: Create EMS/Fire Dispatch Center

Section 6 contains the second alternative to improve dispatch services in Santa Barbara County, which is to create a separate dispatch center for EMS and Fire services. This alternative would remove the EMS/fire dispatch function from the existing county dispatch center and relocate it to a secondary public safety answering point (PSAP) that would exclusively serve EMS and Fire. All E9-1-1 calls would still be answered at the primary PSAP, but once the nature of the call is determined, EMS and Fire calls would be transferred to the secondary PSAP run by EMS and County Fire.

The secondary PSAP could be designed to incorporate dispatching for other fire agencies in the county, which would greatly enhance efforts to regionalize fire services dispatching throughout the county. Having a single facility dispatching most or all fire services in the county would allow:

- the dropping of geographic boundaries for closest unit dispatching
- cross jurisdictional resource deployments and single ordering point for large incidents
- continuity of command and control functions

Most of the Fire Chiefs in the County have expressed an interest in being dispatched by a single entity and would likely join a regional EMS/fire dispatch center that is developed by the county.

This consolidated model for EMS/fire dispatching has proved effective and worked very well in other counties and metropolitan areas; including those served by the Metro Net Fire Dispatch Center (Orange County), the Ventura County Fire Communications Center and the Verdugo Fire Communications Center (Los Angeles County). Advocates of the regional EMS/fire dispatch approach indicate that it provides a singular focus on Fire and EMS operations, flexibility of recruiting and specificity of dispatcher training.

Though there are many advantages to the consolidated EMS/fire dispatching model, a significant disadvantage is that it will require a separate essential services facility and a significant commitment of financial resources. In addition, given the general trend towards regional consolidation of public safety dispatch centers, it may be challenging at this point for the county to obtain significant 911 funding for a secondary PSAP from the State of California, as other centers have in the past.

Secondary PSAPs also require EMS and Fire calls to be transferred from the primary PSAP to the secondary PSAP, which could result in slight delays during the transfer. However, even with considerations such as these, stakeholders we interviewed from the consolidated EMS/fire dispatch centers reported that they are able to provide a superior service to their first responders.

To create a secondary PSAP for EMS and Fire, we recommend the actions outlined below, which are more fully described in Section 6:

- Form Migration Planning Working Group
- Coordinate with CAL OES to Identify Startup Funding
- Identify Executive Director of Secondary PSAP
- Identify Technology Requirements for Secondary PSAP
- Develop Timeline and Budget for the Project
- Identify Location and Construct/Renovate Secondary PSAP
- Recruit and Train Secondary PSAP Staff
- Transition EMS/Fire Calls to Secondary PSAP

1.4 Estimated Costs of Alternatives

Section 7 contains one-time and recurring cost estimates for both of the alternatives (Alternative 1 and Alternative 2) in the report. These estimates are based on the current costs of the existing dispatch center, the dispatch center budget for FY 2017-2018, our knowledge of radio and CAD procurements for systems of similar size and our estimate of the staffing and resources that would be required under each alternative.

Alternative 1 maintains the dispatch center in its current form as a primary public safety answering point (PSAP), with dispatch services being provided to EMS, Fire and the Sheriff’s Office by a single entity. To implement the recommendations associated with Alternative 1, it is estimated that a \$140,000 one-time investment and an additional \$1,139,000 in annual recurring costs will be required, as shown in Table 1:

Table 1: Alternative 1 – Estimated Additional Costs for Optimizing the Existing PSAP

One-Time Estimated Costs	\$140,000
Additional Annual Funding Required	\$1,139,000

Alternative 2 would remove the EMS/fire dispatch function from the existing county dispatch center and create a secondary public safety answering point (PSAP) that would exclusively serve

EMS and Fire. To implement the recommendations associated with Alternative 2, it is estimated that an \$8,657,000 one-time investment and an additional \$2,838,000 in annual recurring costs will be required, as shown in Table 2:

Table 2: Alternative 2 – Estimated Additional Costs for Operating Two PSAPs

	Primary PSAP (Sheriff)	Secondary PSAP (EMS/Fire)	Total
One-Time Estimated Costs	\$0	\$8,657,000	\$8,657,000
Additional Annual Funding Required	\$2,165,000	\$673,000	\$2,838,000

A summary of the additional annual funding required for each alternative is shown in Table 3 below:

Table 3: Estimated Recurring Cost Difference of Alternatives

	Existing PSAP	Alternative 1 Optimize PSAP	Alternative 2 Operate Two PSAPs
Annual Recurring Costs	\$5,116,000	\$6,255,000	\$7,954,000
Existing PSAP Annual Costs		<u>5,116,000</u>	<u>5,116,000</u>
Additional Annual Funding Required		\$1,139,000	\$2,838,000

1.5 Conclusion

In this report, two alternatives have been presented to improve the dispatching services provided to first responders in the County. By implementing the recommendations associated with one of these alternatives, public safety dispatch services in Santa Barbara County will be better positioned to support the needs of emergency medical services (EMS), fire services and law enforcement personnel, and the delivery of public safety services to the citizens of the County will be enhanced.

We wish to thank all of the project participants for the cooperation and input we have received during this study and we look forward to working with the stakeholders to implement the recommendations that are selected.

Section 2– Project Overview

2.1 Background Information

The County of Santa Barbara stretches along the Pacific Ocean from the southern region of California to the Central Coast of the state. The County has a population of over 430,000 residents and a geographic area of more than 3,700 square miles, which includes approximately 1,050 square miles of water. The County includes four of the Channel Islands, Santa Barbara, San Miguel, Santa Cruz and Santa Rosa, as well as part of the Los Padres National Forest.

Since 1977, the Santa Barbara County Sheriff’s Office has provided public safety dispatch services for Emergency Medical Services (EMS), Santa Barbara County Fire and the Sheriff’s Office through the Public Safety Dispatch Center, which is one of six Public Safety Answering Points (PSAPs) in the county. The Sheriff’s Office manages and provides all of the employees for the county’s dispatch center and receives reimbursement for dispatch services from the county’s EMS provider American Medical Response (AMR), the City of Guadalupe and County Fire.

Over the years, various initiatives and studies have been undertaken to analyze the dispatch center and its operations, review costs and cost sharing methodologies, and provide recommendations to improve the services the center provides to first responders and Santa Barbara’s citizens and visitors. These efforts have included the following:

Table 4: Previous Dispatch Center Initiatives/Reports

Year	Study
2004	E9-1-1 Dispatch Project Charter was initiated to “explore, cost out, and make recommendations on ways to best meet community needs for emergency medical dispatch services”
2005	Management Partners conducts an organizational review of the County Fire Department, which includes an analysis of dispatch services
2012	City Gate reviews dispatch services
2014	RCC Communications Center Assessment commissioned and drafted, but not accepted by the Sheriff’s Department
2016	Dispatch Center Audit Report conducted by the County Auditor-Controller

These efforts were conducted primarily at the request of the county's Fire Department, which has had longstanding concerns about the level of services it receives from the Sheriff's Department and the cost of those services. The Emergency Medical Services (EMS) Agency shares these concerns and has additional concerns about the efficiency and effectiveness of the pre-arrival instructions provided to callers in need of emergency medical dispatching services.

Each of the previous initiatives has produced recommendations to improve dispatch operations, provide better cost accounting for dispatch services and/or enhance the management of the dispatch center. While changes have been made within the center over the years, to date the EMS Agency and Fire Department have not been satisfied with the overall level of service and accountability they receive from the dispatch center.

To address the ongoing concerns of EMS and Fire, DELTAWRX was jointly selected by the Sheriff's Department, County Fire and the EMS to take a fresh look at the dispatch center and provide alternatives to improve dispatching services. This report provides a high-level overview of the dispatch center and the current environment, a review of the issues identified by stakeholders and two alternatives to improve the delivery of dispatching services to the county's first responders.

2.2 Goals for the Project

The Request for Information that initiated this project identified the expectations of County Fire and the EMS Agency for improvements in dispatching. We discussed these goals at our initial kickoff meeting with the project team and received additional input from the Sheriff's Department regarding their objectives. Based on our discussions, we have prepared the following list of stakeholder goals for the project:

- Create a true governance group with shared authority among the agencies
- Establish service level agreements, clear policies and practices and appropriate expectations
- Create a transparent, reasonable and appropriate cost allocation methodology for shared dispatch services that meet national guidelines
- Improve current call management with focus on operational efficiency and improved service delivery to the general public
- Improve CAD functionality and provide comprehensive data metrics
- Develop clear long-term implementation goals for routine CAD upgrades deemed necessary by EMS, Fire and the Sheriff's Office and a corresponding capital reserve
- Develop back up facility options for disasters, system outages and special operations
- Increase capabilities and focus on medical fire rescue issues
- Implement consistent supervision for dispatchers

- Dedicate a dispatcher with specific medical-fire-rescue knowledge, skills & abilities (KSA) for working incidents
- Develop common dispatch/operating radio frequencies for all medical/fire rescue dispatches
- Direct closest resource to medical and fire emergencies via AVL and direct resources across jurisdictional boundaries
- Ensure all Fire/EMS dispatchers are ROSS trained and familiar with State/Federal incident ordering practices
- Provide consistent, accurate and uninterrupted EMD for all medical calls
- Fully and consistently implement the EMS provider's system status management plan

2.3 Project Methodology

To conduct this Analysis of Public Safety Dispatch Center Alternatives for Santa Barbara County, DELTAWRX gathered data from a wide variety of sources. We held an initial kickoff meeting with the county's project team where our staff confirmed goals and outlined our proposed project methodology. We then prepared and distributed to the participating agencies project questionnaires and a list of the statistical information we would like to review. Next, we conducted a series of one-on-one interviews and focus group discussions to identify the strengths and weaknesses of the current communications environment and to understand better the perspectives of various dispatch center stakeholders. Among the stakeholders we interviewed were representatives from the following entities:

- American Medical Response (AMR)
- Carpinteria-Summerland Fire Protection District
- City of Guadalupe
- City of Lompoc Dispatch Center
- City of Lompoc Fire Department
- City of Lompoc Police Department
- Montecito Fire
- Santa Barbara City Fire
- Santa Barbara County CEO's Office
- Santa Barbara County Radio Shop
- Santa Barbara County EMS Agency
- Santa Barbara County Fire Department
- Santa Barbara County Public Safety Dispatch Center
- Santa Barbara County Sheriff's Office
- Santa Maria Dispatch Center
- TriTech Software Systems
- Ventura County Fire Department

We also observed call taking and dispatching over multiple days at the county dispatch center, conducted ridealongs with Fire, Sheriff and AMR and ultimately spoke with more than eighty people from the county & neighboring agencies. We compiled the results of our assessment of the current environment and discussed them with the project team.

We next used the quantitative data collected from the dispatch center to analyze the staffing and workload requirements of the current dispatch model. We then looked at staffing requirements under various operational models and discussed the alternatives with the county's project team.

Next, we developed a benchmarking survey and gathered information from five consolidated Fire/EMS communications centers to help identify best practices in a consolidated fire communications centers. We chose successful, multi-agency operations focused on Fire/EMS dispatching, based in or near California that were governed by different management models (e.g., joint powers authority (JPA), subscriber model, etc.). Findings from the benchmarking effort were then discussed with the county's project team.

Following the current environment assessment, the staffing analysis and our review of other consolidated Fire/EMS communications centers, DELTAWRX worked with the project team to identify dispatch options that merited further analysis based on their likelihood of fulfilling the stated project goals. The two options the team has considered are presented in Section 5 and Section 6 of this report.

Section 3 – Current Environment

In this section of the report, we provide an overview of the dispatch center and the county departments it serves.

3.1 Santa Barbara County Public Safety Dispatch Center

Since 1977, the Santa Barbara County Public Safety Dispatch Center has provided dispatching services for EMS, Fire and law enforcement within the county. The dispatch center is operated by the Sheriff’s Office and provides services to the following entities:

- Guadalupe Fire Department
- Guadalupe Police Department
- Santa Barbara County Animal Services (after hours)
- Santa Barbara County Emergency Medical Services Agency
- Santa Barbara County Fire Department
- Santa Barbara County Probation Department
- Sheriff’s Office (including the contracted cities of Buellton, Carpinteria, Goleta and Solvang)

The Dispatch Center receives roughly 800 calls per day, approximately 160 of which are 9-1-1 emergency calls. This equates to approximately 284,000 total calls per year. The distribution of emergency calls breaks down roughly as follows:

Table 5: E9-1-1 Call Ratio

Discipline	E9-1-1 Call %
EMS	22%
Fire	8%
Law Enforcement	70%

The center is authorized for 32.5 positions, which includes 24 Dispatchers, 6 Dispatch Supervisors, a mapping technician, a civilian Operations Manager and half the time of a Sheriff’s Commander.

The FY2017-2018 budget for the dispatch center is \$5,116,000, which is shown in Table 6 below:

Table 6: FY2017-2018 Budget for Dispatch Center

Item	FTEs	Annual Cost
Existing Personnel Costs	32.5	\$4,398,000
Services & Supplies		718,000
Total Actual Costs (Personnel & Other) (1)		\$5,116,000
Total Dispatch Center FY17-18 Funding Sources		
EMS		1,471,000
Fire		1,455,000
General Fund + Guadalupe PD Contributions		2,190,000
Total Funding Sources		\$5,116,000
Notes:		
(1) Does not include Sheriff's Office indirect overhead charges		

Together, EMS and Fire provide \$2,926,000 in funding for the center, Guadalupe PD provides \$55,000 and the remaining \$2,135,000 is provided by the General Fund.

3.2 Santa Barbara County Sheriff

The County Sheriff's Office is the largest public safety agency in Santa Barbara County with approximately 650 regular employees and more than 200 volunteers. The agency is responsible for providing primary law enforcement services to over 200,000 people in the unincorporated areas of Santa Barbara County and within the contract cities of Buellton, Carpinteria, Goleta and Solvang.

The agency consists of four branches: Executive, Law Enforcement Operations, Custody Operations and Support Services. With the exception of the Executive Branch, each branch is led by a Chief Deputy. Each branch has multiple divisions, led by Commanders, that are divided by either geography or function. Within each division are bureaus, which are managed by lieutenants or civilian managers. The Sheriff's Office maintains a Headquarters, five patrol sub stations, four storefront offices, eight administrative offices and an aviation hangar.

The Executive Branch is led by the Sheriff and Undersheriff and consists of the Special Projects and Coroner's Bureau, Professional Standards Unit, Office of Public Information and agency Legal Advisor.

The Support Services Branch includes the Operations Support Division, which manages the Public Safety Dispatch Center. The Operations Support Division also contains the agency's Human

Resources Bureau, Training Bureau and an Air Support Unit that is jointly managed with County Fire.

The Law Enforcement Operations Branch consists of the North and South County Patrol Operations Divisions and the Criminal Investigations Division. The North County Patrol Division is responsible for the unincorporated areas of Lake Cachuma, Los Alamos, Lompoc, New Cuyama, Orcutt, Santa Ynez Valley, Vandenberg Village and the Chumash Indian Reservation and provides contracted law enforcement services for the cities of Buellton and Solvang. The South County Patrol Division handles law enforcement services for the unincorporated areas of Gaviota, Goleta Valley, Isla Vista, Montecito and Summerland and provides contracted law enforcement services for the cities of Carpinteria and Goleta. These two divisions consist of an average of 28 to 42 patrol units to handle calls for service.

The Criminal Investigations Division handles follow up and special investigations throughout the County. This division is composed of the Criminal Investigations Bureau, Judicial Services Bureau and Special Investigations Bureau. Units within these bureaus include Civil, Courts, Forensics, Homeland Security, Narcotics, Organized Crime and Records.

The Custody Operations Branch is responsible for providing facilities for the detention of over 1,000 pre-sentenced and sentenced male and female inmates as mandated by law. Services include booking, housing, inmate medical, inmate transportation and mental health services. Programs provided to reduce recidivism and facilitate successful reentry into the community include inmate education, vocational counseling and community work.

Some of the special units and teams maintained by the Sheriff's Office include the Bomb Squad, Dive Team, Hostage, Explorer Scout Troops, Negotiation Team, Mounted Unit, Search and Rescue Team and Special Enforcement Team.

3.3 Santa Barbara County Fire

The Santa Barbara County Fire Department was originally established as the Santa Barbara Forestry Department in 1926 and officially became the Santa Barbara County Fire Department in 1956. The Department provides all risk fire protection and rescue services to the Santa Barbara County Fire Protection District (primarily the unincorporated portions of the county) and the cities of Buellton, Goleta and Solvang.

County Fire operates two Battalions from its 16 fire stations: Battalion 1 South has seven stations and Battalion 2 North has nine stations. The department is divided into three divisions, Support Services, Fire Prevention and Operations, with approximately 250 full time employees and responds to more than 15,000 incidents annually.

The Santa Barbara County Fire Department is one of six contract counties that have executed contracts with the State of California/CAL FIRE to provide wildland fire protection on state

responsibility areas (SRAs). The SRA within the jurisdiction of the Santa Barbara County Fire Department encompasses approximately 1,070 square miles in the region. During wildfire incidents, the department must provide local dispatching services, mutual aid coordination and local resources for fire management, suppression and support in the SRA.

Additionally, the department is the California Master Mutual Aid - Operational Area Coordinator and must organize and coordinate the local mutual aid response of all Santa Barbara County fire agencies and dispatch all Cal OES and/or local fire and rescue resources from the operational area for statewide major mutual aid operations.

The Fire Department responds to all types of emergencies, including fire, medical, rescue and hazardous materials incidents. Each fire station is staffed around the clock with a minimum of three firefighters and a Type I (structure) engine. Specialized equipment, such as Type III (wildland) fire engines, water tenders, paramedic rescue ambulances, technical rescue and water rescue equipment, is strategically placed throughout the County and cross-staffed with existing engine personnel. In addition to fire station response capabilities, the Department staffs and responds with helicopters, bulldozers and hand crews to fire, pre-fire, flood, and other disasters.

County Fire cross-trains its firefighters and operates specialized programs out of strategic locations. Specialized programs include paramedic services, ambulance transport services, water rescue services, urban search and rescue services, hazardous material response services, a search dog program and an arson dog program.

3.4 EMS Agency

The EMS Agency provides the administrative and regulatory oversight for the local EMS system. The primary function of an EMS Agency is to plan, implement, and evaluate the local EMS system and the various components contained within it. This includes the licensing and contract management of ambulance providers, coordination and monitoring of air and ground ambulances, certification/accreditation of prehospital care personnel – Emergency Medical Technicians (EMT) and paramedics, policy development and implementation, medical control, quality improvement, Emergency Medical Dispatch (EMD) and disaster medical response preparedness. Currently, the EMS Agency contracts with AMR to provide ambulance services throughout most of the county. AMR operates seven 24-hour ambulances and fifteen 12-hour ambulances with a peak deployment of 22 ambulances during the busiest times. In addition, AMR fields one critical care transport unit, one neo-natal care unit and two 24-hour supervisors.

Section 4 – Overall Findings

This section contains our high-level findings regarding the county’s current public safety dispatch center. Our findings are broken down into the following areas: operations, management, technology and backup. While this is not intended to be an exhaustive list of all issues that were identified during the study, it includes those issues that we consider most important to the future success of the dispatch center.

4.1 Dispatch Center Operations

Dispatch Center Staff Members Are Dedicated and Hard Working

Each of the dispatchers we interviewed strives to provide a high level of service to the residents and first responders of the county. Public safety dispatching is a high-stress environment that requires a unique skillset, including the ability to:

“retain and relay information received under stressful conditions; speak over the phone and radio clearly and in a professional manner; hear, understand and speak the English language; respond to calls quickly and calmly and make sound decisions under pressure; communicate with people of diverse social and cultural backgrounds; follow written and oral instructions; establish and maintain working relationships with other agencies; operate computer and typewriter keyboards; read maps and give directions; keep detailed records; learn Federal, State, and local laws, terminology, and jurisdictional boundaries, and available types of emergency services.”¹

Clearly, being a dispatcher is a very demanding job. The county’s dispatchers understand the importance of their work to the safety and security of county residents and they strive to get the proper emergency resources where they are needed as quickly as possible.

The Dispatch Center Is Rarely at Full Staffing Levels

The dispatch center is authorized for 24 dispatcher positions; however, the center is chronically understaffed for a variety of reasons that include issues with the retention of existing employees, the difficulty of recruiting and training new employees and the inability to hire more than the authorized number of employees. Historically, it has taken from 18 to 24 months for an applicant to complete the hiring process and be trained for call taking and law enforcement dispatching; this makes it difficult to quickly respond to employee departures and nearly impossible for the center to remain at full staffing levels.

¹ Abilities as identified in Santa Barbara County Communications Dispatcher I job posting

When all 24 authorized dispatcher positions are not filled, additional burdens are placed on the existing dispatchers, whether it be increased workloads during a short-staffed shift or forced overtime when volunteers are not available for needed shifts. Shortages can also limit the ability of dispatch personnel to plan their vacations and can negatively affect the long-term retention of employees.

This type of understaffing is a common problem in public safety dispatch centers. A study² conducted on behalf of the Association of Public Safety Communications Officials (APCO) indicated that only about one third of dispatch centers have enough normal staff to handle the workload and about 40% of large centers over hire to accommodate routine turnover or unexpected employee absences.

Supervisors Are Often Relied Upon As Dispatchers

Because the dispatch center is often understaffed, Supervisors are often required to spend their shift working as a dispatcher. This makes it difficult for the Supervisors to provide guidance and supervision to dispatchers during a shift and can reduce the supervisor's ability to help manage critical incidents.

4.2 Dispatch Center Management

EMS and Fire Do Not Share Executive Oversight of the Dispatch Center With Sheriff

Both the EMS Agency and County Fire feel that they do not have adequate input into the management of the dispatch center. This issue has been raised in most of the previous dispatch center studies that have been conducted and it remains an issue today. While there is a Governance Group of EMS, Fire and Sheriff's representatives that meets to discuss operational matters in the dispatch center, the group has no formal authority and is primarily an advisory group to the Sheriff's management staff.

There Is Limited Continuity in the Executive Management of Dispatch Center

A Sheriff's Office Commander is ultimately responsible for the management and oversight of the dispatch center. The Commander is allocated 50% of the time to the dispatch center and 50% of the time to other functions outside the dispatch center. Additionally, Commanders are rotated in and out of the dispatch center, as they are reassigned duties throughout the Sheriff's Office. This and other factors have led to the center being managed by three different Commanders in the past four years, which has limited the continuity of executive management. In some instances, Commanders are brought into the dispatch center with limited understanding of dispatch operations

² "Staffing and Retention in Public Safety Communications Centers," APCO Project RETAINS, August, 2005

and must be brought up to speed in order to be effective. When Commanders are rotated out of the dispatch center, their knowledge and expertise leaves with them.

4.3 Technology and System Support

The CAD System Is Not Being Fully Utilized and Has Limited Expert Support

The TriTech computer aided dispatch (CAD) system tracks the demand for emergency services (i.e., E9-1-1 calls) in the county and the status and availability of the public safety resources that are active in the field. Support for maintaining the CAD system has been provided primarily by a dispatch center supervisor who has been reassigned from the dispatch floor. While the CAD system has been reliable overall, the system could be more fully utilized to better support operations. For example, the TriTech CAD software can provide geographically based closest-unit dispatching (which is highly desired by EMS and Fire), but the county's system requires an upgrade to its mapping software in order to provide this feature. Performing upgrades like this and fixing the trouble tickets reported by the users are difficult with the limited technical resources that are currently available within the dispatch center.

4.4 Backup Dispatch Facility

There Is Limited Backup for the County's Existing Dispatch Center

If the dispatch center must be evacuated due to a natural disaster, another emergency or for technical issues, there are limited backup capabilities for E9-1-1 dispatching. The primary backup option is to move dispatchers to the Santa Barbara City dispatch center, where they can answer E9-1-1 calls but do not have access to the TriTech CAD system or other county resources. The other alternative is to utilize a communications trailer from the Sheriff's Office, where dispatchers can communicate with field units on the radio, but are not able to take E9-1-1 calls. In both these instances, dispatchers must manually track requests for emergency service and responses, and enter them into the CAD system when it becomes available.

* * * * *

While many of these issues have been identified in the previous dispatch center studies conducted for the county, the issues still remain. The current management team has taken some action, but significantly more must be done to resolve these issues. In the following sections, we provide two alternatives that the EMS Agency and Fire Department feel will provide a foundation to address these and other issues in the dispatch center and ensure that county residents and first responders get the public safety dispatching services they deserve.

Section 5 – Alternative 1: Optimize Current Operation

The initial dispatch alternative to be considered is to optimize the current dispatch operation. This alternative involves maintaining the dispatch center in its current form as a primary public safety answering point (PSAP), with dispatch services being provided to EMS, Fire and the Sheriff's Office. This approach is common for public safety dispatch centers and has worked effectively in jurisdictions as diverse as Albemarle County, Virginia; Deschutes County, Oregon; Monterey County, California and Ramsey County, Minnesota.

The consolidated multi-discipline dispatch center is consistent with the general trend towards regional consolidation in dispatch services and offers economies of scale and operational efficiencies for public safety stakeholders. In consolidated dispatch centers, a 911 caller only has to talk to a single person and does not need to be transferred to another PSAP for a fire or EMS response. Likewise, when EMS, fire and law dispatchers are in the same facility, it can be easier for the dispatchers to coordinate the response for larger incidents that require a variety of public safety resources.

However, operating a multi-disciplinary dispatch center presents challenges as well. In centers where individual dispatchers work each discipline (such as the Santa Barbara County PSAP), dispatchers must be fully cross trained and competent in the procedures and operations of EMS, fire and law enforcement. While this provides the center flexibility in staffing and dispatch coverage, some feel that, due to the complex and diverse nature of law and EMS/fire responses, it is difficult to become and remain fully competent in all disciplines. Additionally, County Fire feels that the background check requirements necessary for dispatchers in a law enforcement environment eliminate some candidates who could be effective EMS/fire dispatchers, which exacerbates the problems of recruiting and hiring personnel in the center.

To improve dispatch operations in Santa Barbara County while retaining the current dispatching model, we recommend the following actions:

5.1 Form a Multi-Disciplinary Executive Oversight Group

Historically, executive oversight of the dispatch center has been the exclusive responsibility of the Sheriff's Office. Since at least 2004, EMS Agency and County Fire executives have felt that they have had insufficient input into the operations of the dispatch center. While we are aware of a Memorandum of Understanding (MOU) for FY 2006-2008 between the Sheriff's Office and the Public Health Department that addresses dispatching service, we are not aware of any other documented service level agreements or MOUs related to the services that EMS and Fire receive. In order to provide appropriate input for all parties on an ongoing basis, we recommend that an executive committee or governance board be formed with representatives from EMS, Fire and the Sheriff's Office to provide strategic direction for and oversight of the dispatch center. The oversight

group should share authority over the dispatch center and should negotiate a governance agreement that includes appropriate cost sharing and operating plans.

The creation of the oversight group would also enhance efforts to regionalize fire services dispatching throughout the county. Most of the Fire Chiefs in the county have expressed an interest in having a single PSAP dispatch calls for all Fire Departments in Santa Barbara County. Having a single facility dispatching most or all fire services in the county would allow:

- the dropping of geographic boundaries for closest unit dispatching
- cross jurisdictional resource deployments and single ordering point for large incidents
- continuity of command and control functions

The Chiefs also strongly prefer that the Fire Departments be represented in the governance of the dispatch center. Some Chiefs have indicated that they would be willing to be dispatched by the county's current PSAP if an equitable governance model was put in place and governance of the center was shared with the fire service.

5.2 Replace Sheriff's Commander with Civilian Executive Director

The dispatch center is currently managed by a Sheriff's Office Commander and a dispatch center Manager. While the Manager is in the center full time, the Commander is allocated only 50% of the time in the center. We believe that replacing the Sheriff's Commander with a civilian Executive Director position would better serve the dispatch center staff and enhance center operations. We recommend that an executive search be conducted to identify candidates with experience managing a multi-discipline public safety dispatch center and appropriate professional certifications (such as APCO International's Registered Public Safety Leader (RPL) and/or NENA's Emergency Number Professional (ENP) certification). Suitable candidates should be interviewed by representatives of the Executive Oversight Group and the successful candidate should be a consensus pick approved by EMS, Fire and the Sheriff's Office.

The existing Manager position could be retained in the short term to assist in the transition of leadership from the Commander to the Executive Director and to help implement the recommendations for this alternative. While the position would certainly be useful and provide an additional opportunity in the career path of dispatchers and supervisors, it is possible that, in the long run, the Manager's administrative responsibilities could be distributed among the dispatch supervisors. With this in mind, the Executive Oversight Group should work with the new Executive Director to develop a long-term staffing model for the organization.

5.3 Develop a Multi-Year Budget for the Dispatch Center

Initially, the Executive Director should work with the Executive Oversight Group to develop a plan for the ongoing staffing, equipment, technology, facility and cost allocation methodology that is

needed to support the PSAP. This plan can then be used to develop a comprehensive annual budget and long-term financial plan for the dispatch center. The budget should cover the day-to-day operation of the center, as well as capital expenditures for planned investments in technology and facility upgrades. The Executive Director should manage to the approved budget and the stakeholders should be apprised of budget variances as appropriate. Contributions by the participating agencies should be based on the approved budget and adjusted periodically based on actual expenses incurred during each fiscal year.

5.4 Create a New Position for E9-1-1 Call Taking

The dispatch center is challenged with maintaining appropriate staffing levels during all shifts. In the current dispatch center configuration, ideally there is a dispatcher available to function as a call taker and answer E9-1-1 calls, query the caller and enter relevant information into the CAD system so that proper resources can be assigned by another dispatcher. For medical calls, the call-taker is also responsible for providing pre-arrival medical instructions for victims with medical emergencies prior to the arrival of an EMS unit. This process, known as emergency medical dispatch or EMD, can greatly improve the outcomes and survival chances of victims if medical intervention is provided as quickly as possible.

At times, there is no dispatcher available to act exclusively as a call taker and the responsibility for answering E9-1-1 calls and providing EMD falls to the EMS or Fire dispatcher. This can create significant challenges as the EMS or Fire dispatcher may then be responsible for assisting the E9-1-1 caller, providing medical instructions and coordinating EMS and/or Fire resources in the field. In this case, the combined call taker/dispatcher may have to prioritize periodically one of the functions over the others, which may affect communications with first responders or delay emergency medical instructions to E9-1-1 callers.

We recommend that a new job classification be created and five additional staff be added so that a call taker can reliably be available in the dispatch center. Ultimately, to minimize the interruption of EMD calls, two call takers should be available during peak times and one call taker available at other times.

In the past, many trainees have been unable to handle the increased workload and stress of the dispatch positions, which is currently a requirement to complete their probation. Creation of the call taker position will allow the dispatch center to retain some of these trainees as call-takers, which should help alleviate some of the existing recruiting and retention problems in the dispatch center.

5.5 Combine EMS and Fire Dispatch Function

The dispatch center has an individual dispatcher dedicated to EMS and another dispatcher dedicated to Fire. Each dispatcher is responsible for their respective field units and the dispatchers operate mostly independently, even though many of the E9-1-1 calls require both an ambulance and

firefighters to be dispatched to the same location. We recommend that the EMS and Fire dispatching function be combined to allow a single (primary) dispatcher to dispatch EMS and Fire units simultaneously, which will reduce the overall workload in the dispatch center. Importantly, utilizing a single person to dispatch both EMS and Fire units would ensure that the units receive the same information on common incidents. The second EMS/fire dispatcher would then be freed up to handle administrative dispatch traffic, support the appropriate deployment of resources (system status management) and provide tactical dispatching for working incidents. While this reassignment of responsibilities will not change the number of employees that are required, it will result in a more efficient use of dispatch personnel.

This consolidated dispatching approach has been discussed with the stakeholders and the concept was well received. EMS and Fire are currently working together with the Sheriff's Office to determine the changes that will be needed in the CAD system, how the radio system will be utilized and how responsibilities will be divided between the primary and secondary EMS/fire dispatchers to support the simultaneous dispatching of EMS and Fire units by a single dispatcher.

5.6 Revise the Approach for Training Dispatchers

The current process for training dispatchers requires new employees to focus on call taking and law enforcement dispatching for approximately one year before they begin to train on the EMS and Fire console positions. During their year of call taking and law enforcement training, trainees are observed by a trainer who provides continuous feedback on their performance. If the trainee successfully completes their initial training, they are approved to be a call taker/law enforcement dispatcher and can begin training on the EMS and Fire positions. However, the subsequent training for the EMS and Fire positions is shorter and much less structured than the law enforcement training. Additionally, because EMS and Fire have not chosen to be directly involved in developing the curriculum and guidelines for training EMS/fire dispatchers, there is no clear consensus between the Sheriff's Office and EMS/fire on the essential knowledge, skills and abilities needed for EMS/fire dispatchers.

We have discussed with the dispatch center management several possible changes to the training approach for staff, including training dispatchers on the EMS/fire console positions before law enforcement when appropriate and retaining qualified call-takers who are unable to be certified in the dispatch positions. Management indicates they are open to making these changes, which we recommend. We also recommend that EMS and Fire be directly involved in and share the cost and responsibility for developing the training curriculum for the EMS/fire dispatchers.

5.7 Provide Additional Technical Resources for CAD System

The TriTech computer aided dispatch (CAD) system is a robust and complex dispatch aid. CAD is an essential tool that dispatchers use to both identify the demand for emergency services (i.e., E9-1-1 calls) and track the status of first responders in the field. The performance of the CAD

system has been adequate, but it is underutilized and could be significantly re-structured and tailored to better support Fire/EMS field operations and reduce dispatcher workloads.

The current approach for managing the CAD system involves assigning a dispatch center supervisor, who is occasionally assisted by TriTech personnel, to address CAD issues and provide support for users. In contrast, the Ventura County Fire Communications Center utilizes the same CAD vendor as Santa Barbara County but Ventura County has three full-time dedicated TriTech employees to support its system and users. While the county may not require three dedicated TriTech employees full-time to support the CAD system, the system could be better tailored to meet the needs of the stakeholders if additional technical resources were available. These needs include the ability to dispatch the closest unit to an incident and to use a tablet computer to receive E9-1-1 call information, display response route information and provide status updates for first responders.

5.8 Explore the Creation of a Backup Dispatch Facility

Because there are limited options to maintain public safety dispatching in the event that the primary PSAP must be evacuated, the county should explore the creation of a backup dispatch facility. This could be accomplished by either 1) constructing a new state-of-the-art dispatch center and converting the existing facility into a backup facility or 2) maintaining the existing facility as the primary PSAP and creating a backup facility.

To offer comprehensive backup capabilities, the backup PSAP will require a many of the same technology systems as the existing dispatch center, including the following:

- E9-1-1 Telephone System
- Administrative Telephone Lines
- Voice Radio Communications Consoles
- Backup Radio Control Stations and/or Portable Radios
- Computer Aided Dispatch System
- Fire Records Management System
- Backup Power Systems
- Fire Station Alerting System

The oversight group should determine the level of redundancy that is desired in the backup PSAP (e.g., limited vs. complete) and develop a plan for implementing a backup facility.

Section 6 – Alternative 2: Create EMS/Fire Dispatch Center

The second alternative to improve dispatch services in Santa Barbara County is to create a separate dispatch center for EMS and Fire services. This alternative would remove the EMS/fire dispatch function from the existing county dispatch center and relocate it to a secondary public safety answering point (PSAP) that would exclusively serve EMS and Fire. All E9-1-1 calls would still be answered at the primary PSAP, but once the nature of the call is determined, EMS and Fire calls would be transferred to the secondary PSAP run by EMS and County Fire. The Sheriff's call taker would typically remain on the line after the transfer for calls that may require both an EMS/fire and law response.

A new secondary PSAP could be designed to incorporate dispatching for other fire agencies in the county, which would greatly enhance efforts to regionalize fire services dispatching throughout the county. Having a single facility dispatching most or all fire services in the county would allow:

- the dropping of geographic boundaries for closest unit dispatching
- cross jurisdictional resource deployments and single ordering point for large incidents
- continuity of command and control functions

Most of the Fire Chiefs in the County have expressed an interest in being dispatched by a single entity and would likely join a regional EMS/fire dispatch center that is developed by the county.

This consolidated model for EMS/fire dispatching has proved effective and worked very well in other counties and metropolitan areas; including those served by the Metro Net Fire Dispatch Center (Orange County), the Ventura County Fire Communications Center and the Verdugo Fire Communications Center (Los Angeles County). Advocates of the regional EMS/fire dispatch approach indicate that it provides a singular focus on Fire and EMS operations, flexibility of recruiting and specificity of dispatcher training.

Though there are many advantages to the consolidated EMS/fire dispatching model, this approach will require a separate essential services facility and a significant commitment of financial resources. In addition, given the general trend towards regional consolidation of public safety dispatch centers, it may be challenging at this point for the county to obtain significant 911 funding for a secondary PSAP from the State of California, as other centers have in the past. Secondary PSAPs also require EMS and Fire calls to be transferred from the primary PSAP to the secondary PSAP, which would result in slight delays during the transfer. Occasionally, the EMS/fire PSAP may need to request a law response from the Primary PSAP (via a direct ringdown line) for calls in which it was not initially apparent that a law response was needed. However, even with considerations such as these, stakeholders we interviewed from the consolidated EMS/fire dispatch centers reported that they are able to provide a superior service to their first responders.

To create a secondary PSAP for EMS and Fire, we recommend the actions outlined below.

6.1 Form Migration Planning Working Group

The initial step in this process is to form a working group to plan the migration of EMS and Fire dispatch services from the existing PSAP to a newly created secondary PSAP for EMS and Fire. The core members of the committee should come from EMS and Fire, with participation from the Sheriff's Office at appropriate times. The working group should be supplemented, when necessary, with subject matter experts in the areas of facility planning, human resources, information technology and fiscal planning as necessary. The working group will be responsible for developing an overall plan for the migration along with the resources needed throughout the process.

6.2 Coordinate with CAL OES to Identify Startup Funding

Early in the process, the working group should discuss the county's plan to form a new PSAP serving EMS and Fire with the California 9-1-1 Emergency Communications Branch (CA 9-1-1 Branch) of the Governor's Office of Emergency Services. In order to be eligible to receive funding from the CA 9-1-1 Branch, the new PSAP must meet specific criteria, such as a minimum call volume and receipt of specific call types, that are identified in the CA 9-1-1 Operations Manual. Early coordination with the CA 9-1-1 Branch will help ensure that the new PSAP is recognized by the state and is reimbursed for reasonable start-up costs related to the E9-1-1 system and appropriate operating costs of the E9-1-1 equipment.

6.3 Identify Executive Director of Secondary PSAP

We believe that EMS and Fire will best be served by having a civilian Executive Director to manage the EMS/fire dispatch center. We recommend that an executive search be conducted to identify candidates who have appropriate professional certifications (such as APCO International's Registered Public Safety Leader (RPL) and/or NENA's Emergency Number Professional (ENP) certification) and experience managing a Fire or multi-discipline dispatch center. The successful candidate should be qualified to stand up and lead a new organization and must be a consensus pick approved by the EMS Agency and County Fire. We recommend that the EMS/fire PSAP Executive Director be hired early in the process so that he or she can provide as much input as possible into the planning and decision making for the new PSAP.

6.4 Identify Technology Requirements for Secondary PSAP

The new EMS/fire PSAP will require many of the same technology systems as the existing dispatch center, including the following:

- E9-1-1 Telephone System
- Administrative Telephone Lines
- Voice Radio Communications Consoles

- Backup Radio Control Stations and/or Portable Radios
- Computer Aided Dispatch System
- Fire Records Management System
- Backup Power Systems
- Fire Station Alerting System

An important task for the working group is to identify how these systems will be procured and implemented in the new PSAP. Integration with the existing dispatch center will be critical, so that EMS and Fire E9-1-1 calls can be quickly transferred between the two PSAPs. Agreements will need to be made with both the Sheriff's Office and the current technology vendors to address licensing, maintenance and support issues for new equipment that needs to be installed and to preserve the investment in the existing equipment. While it is our understanding that most of the dispatch center systems in use today are generally up-to-date, the county should consider system upgrades for the existing center if equipment compatible with the existing PSAP is not available for purchase.

Ideally, the existing PSAP and the new EMS/fire PSAP will provide backup for one another. The working group will also need to determine whether additional consoles and equipment would be provided in the EMS/fire PSAP to support the Sheriff's Office dispatch operations and how the equipment would be initially funded and maintained on an ongoing basis.

We would recommend that both PSAPs use the same CAD system so that calls for service information can be easily shared between the dispatch centers and combined responses can be effectively coordinated. This will require that a technology sharing agreement be developed between the participants that identifies an equitable approach for cost sharing, maintenance and upgrades for the CAD system. If such an agreement cannot be reached, EMS/fire would likely implement a standalone CAD system.

6.5 Develop Timeline and Budget for the Project

An essential part of standing up the new EMS/fire PSAP will be the development of both a timeline and a budget for the transition. The working group will need to identify all the tasks associated with the transition and coordinate their completion dates so that the disruption to public safety dispatching in the county can be minimized. A critical path analysis of the project tasks should be performed so that the overall time required for the development of the new PSAP can be identified and unnecessary expenditures due to foreseeable delays can be avoided.

Along with the project timeline, a capital project budget should be developed that includes all the initial capital costs to establish the new facility and systems. The timeline and budget will be dependent upon the approach for constructing or renovating the new facility as indicated in Section 6.6, and we expect the tasks in these sections to be performed concurrently. Ongoing operating costs for the new dispatch center must also be developed, and should include salaries and benefits

for personnel, systems support and facility maintenance. These will be important components to keep the project on schedule and within the budget. It is important to note that, once EMS and Fire move to the secondary PSAP, the Sheriff's Office will lose a large portion of the funding it currently receives for the dispatch center.

6.6 Identify Location and Construct/Renovate Secondary PSAP

The working group will need to identify a suitable location for the new EMS/fire dispatch center that can accommodate the required personnel and equipment. This could involve the construction of a new facility or the renovation of an existing facility; however, in any event, the facility must be considered an essential services building and, according to California Health and Safety Code Section 16001, shall be:

“ ... capable of providing essential services to the public after a disaster, shall be designed and constructed to minimize fire hazards and to resist, insofar as practical, the forces generated by earthquakes, gravity, and winds.”

The working group should discuss potential sites with representatives from appropriate county departments that may be involved in the planning, permitting and construction process in order to understand the advantages and disadvantages of each site. Once an acceptable site has been identified, the working group should develop a plan to renovate or construct the EMS/fire PSAP to meet the needs of the stakeholders.

6.7 Recruit and Train Secondary PSAP Staff

One of the most challenging aspects of creating the new PSAP will be assembling the team of employees that will provide and support the dispatching services within the new PSAP. Initially, the working group will need to work with the county's human resources department to establish and post the job classifications for the new PSAP. As indicated in Section 5.4 of Alternative 1, we recommend that a new call-taker position be established as the entry-level position in the existing dispatch center; for the same reasons, we recommend that the call taker position also be established in the new EMS/fire PSAP.

Staffing the secondary PSAP will require a considerable amount of time, as employees must first be screened and hired and then must complete an extensive training period in order to be functional call takers and dispatchers. We estimate that it will likely take at least 12 to 18 months from the time a position is posted, until a dispatcher is fully trained to work independently in the new EMS/fire PSAP.

Policies and procedures for EMS/fire call taking and dispatching within the new PSAP should be developed prior to initiating the training for new call takers and dispatchers. The policies and

procedures can be based on those of the existing dispatch center, but the policies and procedures should be reviewed and updated by the EMS Agency and Fire Department.

The working group will need to develop a strategy for training new staff while the secondary PSAP is being renovated or constructed, and will need to work with the Sheriff's Office to determine the approach for addressing existing dispatch center employees who may wish to transfer to the new center. It will be very helpful if seasoned dispatchers are part of the team when the secondary PSAP begins dispatching for EMS and Fire.

6.8 Transition EMS/Fire Calls to Secondary PSAP

After a facility is renovated or constructed, the staff is adequately trained and all telephone, radio communications and computer systems are fully tested, the county will be in a position to transfer EMS and Fire E9-1-1 call to the secondary EMS/fire PSAP. This transition will have to be carefully coordinated with the Sheriff's Office and the existing dispatch center so that the appropriate E9-1-1 calls can be transferred to the secondary PSAP with minimal impact to the county's residents. The working group should continue to meet during and for a period after the transition to address any issues with transferring calls between the PSAPs or with operations within the secondary PSAP.

Section 7– Estimated Costs of Alternatives

In this section, we provide one-time and recurring cost estimates for both of the alternatives that have been presented. These projections are based on the current costs of the existing dispatch center, the dispatch center budget for FY 2017-2018, our knowledge of radio and CAD procurements for systems of similar size and our estimate of the staffing and resources that would be required under each alternative.

7.1 Alternative 1: Optimize Current Operation

The first alternative is to maintain the dispatch center in its current form as a primary public safety answering point (PSAP), with dispatch services continuing to be provided to EMS, Fire and the Sheriff’s Office by a single entity. The improvements suggested include modifying the management structure of the dispatch center and adding five call takers to the staff.

One-Time Costs

The one-time costs for optimizing the current dispatch operation includes two items: 1) an upgrade to mapping software for the CAD that is necessary to enable the closest EMS or fire unit to be dispatched to an incident and 2) an interface that will allow the fire departments in the County to see and potentially dispatch one another’s fire resources. Table 7 shows the estimated costs for the mapping upgrade and the CAD interface:

Table 7: Alternative 1 – Optimize Current Operations – Estimated One-Time Costs

Item	Cost
ArcGIS Upgrade for CAD	\$15,000
CAD-to-CAD Interface (\$125k/CAD)	125,000
Total One-Time Costs	\$140,000

Each department that desires to share their CAD unit status information with other departments will be required to purchase their own CAD-to-CAD interface at an estimated \$125K each; the costs above only include the cost for Santa Barbara County’s interface.

Other recommendations for this alternative, such as revising the training approach for dispatchers and combining the EMS and Fire dispatch function, will require a one-time effort to implement, but it is assumed that the required work can be accomplished by existing staff resources in the County.

There currently is no ongoing plan for upgrading or replacing the technology in the existing dispatch center and no additional funding has been included in the budget for future technology upgrades. It

is expected that the Executive Director would work with the Executive Oversight group to identify these future upgrades and include them in a multi-year budget for the dispatch center.

Recurring Costs

Table 8 shows an estimate of the additional annual recurring costs that will be required to optimize the current dispatch operation.

Table 8: Alternative 1 – Optimize Current Operations – Estimated Annual Recurring Costs

Item	FTEs	Cost
Existing Personnel Costs	32.5	\$4,398,000
Additional Personnel Costs	6.5	739,000
Current Non-Labor Costs		718,000
Additional CAD/IT Support		400,000
Total Optimized Costs (Personnel & Other) (1)		\$6,255,000
Total Dispatch Center FY17-18 Funding Sources		5,116,000
Total Additional Recurring Funding Required		\$1,139,000
Notes		
(1) Does not include Sheriff's Office indirect overhead charges		
(2) Does not include costs for backup dispatch facility		

The current dispatch facility is authorized for 32.5 full time equivalent (FTE) employees. To help address staffing issues in the dispatch center and address the need to provide uninterrupted emergency medical instructions for critical incidents, we recommend that five call taker FTEs and one dispatcher FTE be added to the staff. We also recommend that the existing Sheriff's Office Commander position (0.5 FTE) be replaced with a civilian Executive Director, which results in an additional 0.5 FTE. Together these result in an increase of 6.5 FTEs at a projected net cost of approximately \$739,000. This estimate does not include any costs for redeploying the existing Commander within the Sheriff's Office. With the addition of an Executive Director and the other recommended staff, it may be possible to allocate the duties of the existing Manager to the dispatch supervisors, who should no longer be burdened with working as dispatchers during their shift. As previously indicated, the Executive Oversight Group should work with the new Executive Director to develop a long-term staffing model for the organization.

The other new recurring charge for this alternative is \$400,000 for additional CAD/IT support that is recommended to address the existing CAD issues and optimize the system for both Sheriff and EMS/fire operations. Combined, the additional recurring costs to optimize the dispatch center are estimated to be \$1,139,000 per year.

7.2 Alternative 2: Create New EMS/Fire Dispatch Center

The second alternative to improve dispatch services in Santa Barbara County is to create a separate dispatch center for EMS and Fire services. This alternative would remove the EMS/fire dispatch function from the existing county dispatch center and relocate it to a secondary public safety answering point (PSAP) that would exclusively serve EMS and Fire.

One-Time Costs

In order to create a secondary PSAP to provide EMS and Fire dispatch services, an essential services facility will be needed to accommodate the required staff and systems. The estimated one-time costs for the facility and systems are shown in Table 9:

**Table 9: Alternative 2 - Create New EMS/Fire Dispatch Center
Estimated One-Time Costs**

Item	Cost
Facility	\$7,432,000
NG911 and Administrative Telephones (1)	197,000
Voice Radio System & Logging Recorder	330,000
Computer Aided Dispatch System	558,000
ArcGIS Upgrade for CAD	15,000
CAD-to-CAD Interface (\$125k/CAD)	125,000
Total One-Time Costs	\$8,657,000

(1) One-time 911 costs of ~\$191,000 may be reimbursed by State 911 funds

The initial estimate includes approximately \$7.4M to renovate an existing facility that has previously been constructed to essential services standards. Construction of a new facility would likely cost significantly more.

The estimate includes the cost of E9-1-1 telephone equipment that may be a reimbursable expense paid for by the California 9-1-1 Emergency Communications Division. Since it is not known at this time whether the initial cost of the E9-1-1 telephone equipment will be reimbursed, we have not included any potential reimbursement funds in the estimate.

The estimate also assumes that the new EMS/fire secondary PSAP will utilize stand-alone systems for radio communications and CAD, but that the two EMS/fire CAD workstation licenses from the existing facility will be transferred to the secondary PSAP. Costs for these systems could potentially be reduced if an adequate technology sharing agreement can be worked out between the Sheriff's

Office and the secondary PSAP. The total one-time cost to create the EMS/fire secondary PSAP is estimated at \$8,657,000.

Recurring Costs

Below, we provide estimates of the ongoing annual costs required to operate both a primary PSAP dedicated to law enforcement and a secondary PSAP dedicated to EMS and Fire services.

Sheriff’s Office PSAP Recurring Costs

Table 10 below shows the additional funding required by the Sheriff’s Office due to contributions from EMS and Fire being shifted to fund a new secondary PSAP in the county:

Table 10: Alternative 2 - Sheriff’s Office PSAP - Estimated Annual Recurring Costs

Item	FTEs	Cost
Existing Personnel Costs	23.0	\$3,159,000
Additional Personnel Costs	3.0	331,000
Services & Supplies		715,000
Additional CAD/IT Support Team		150,000
Total Costs (Personnel and Other)		\$4,355,000
General Fund + Guadalupe PD Contributions		2,190,000
Additional Funding Required for Law Enforcement		\$2,165,000

Existing personnel costs for the Sheriff’s Office will be reduced by approximately \$1,098,000 by eliminating the FTEs associated with the EMS and Fire dispatcher positions. Additionally, we recommend that 2.5 call takers be added to the Sheriff’s Office PSAP for an additional \$255,000 and replacing the Sheriff’s Commander position (0.5 FTE) with an Executive Director (1 FTE) which results in an additional cost of \$52,000.

It is assumed that the services and supplies for the Sheriff’s Office will remain relatively constant, but that the primary PSAP would benefit from additional CAD/IT support estimated at \$150,000.

While the Sheriff’s Office Dispatch program will save approximately \$1,098,000 in personnel costs from eliminating the EMS and Fire dispatch positions, the primary PSAP will no longer receive approximately \$2.9M in funding from EMS and Fire. Collectively, these changes result in an estimated \$2,165,000 in additional funding that will be needed by the Sheriff’s Office in order to maintain the Primary PSAP once EMS and Fire transition to their own secondary PSAP.

EMS/Fire PSAP Recurring Costs

Table 11 below shows an estimate of the annual recurring costs for operating a secondary EMS/fire PSAP in the County:

Table 11: Alternative 2 - EMS/Fire PSAP - Estimated Annual Recurring Costs

Item	FTEs	Cost
Existing Personnel Costs	7.5	\$976,000
Additional Personnel Costs	12.0	1,593,000
Services & Supplies (1)		780,000
Additional CAD/IT Support Team		250,000
Total Costs (Personnel and Other)		\$3,599,000
EMS/Fire Funding Sources		2,926,000
Additional Funding Required for EMS/Fire		\$673,000

(1) 911 Recurring costs of ~\$93,000 may be reimbursed by State 911 funds

In this estimate, we have assumed that dispatchers and supervisors will work 24-hour shifts that correspond with the shifts of firefighters in the field. Call takers will work either 12 or 24-hour shifts to optimize staffing during the busiest times of the day.

The existing personnel costs include the costs of the EMS and Fire positions from the primary PSAP, with the positions converted to 24-hour shifts (resulting in a reduction from 9 to 7 FTEs), and half of the existing GIS Technician, which it is assumed can be shared by the two PSAPs. The additional personnel costs include the salaries for an Executive Director, four supervisors and seven call takers.

Services and supplies are projected to cost approximately \$780,000, which includes approximately \$93,000 in 911 costs that may be eligible for reimbursement by State 911 funds. The recurring costs also include \$250,000 for CAD and IT support to provide enhancements to the EMS and Fire CAD functionality and maintain the CAD system.

The total annual recurring cost for the EMS/Fire PSAP is estimated to be \$3,599,000. Together, EMS and Santa Barbara County Fire are currently spending approximately \$2,926,000 on dispatch services from the Sheriff. If current EMS and Fire spending is applied to the secondary PSAP, an additional \$673,000 will be needed to fund the new PSAP. The funding required for EMS/fire under Alternative 2 would be reduced if other fire agencies chose to be dispatched by the secondary PSAP and contributed to its funding.

7.3 Summary of the Cost Difference of the Alternatives

In this report, we have provided two alternatives to improve the dispatching services within Santa Barbara County. Alternative 1 maintains the dispatch center in its current form as a primary public safety answering point (PSAP), with dispatch services being provided to EMS, Fire and the Sheriff's Office by a single entity. To implement the recommendations associated with Alternative 1, it is estimated that a \$140,000 one-time investment and an additional \$1,139,000 in annual recurring costs will be required, as shown in Table 12:

Table 12: Alternative 1 – Estimated Additional Costs for Optimizing the Existing PSAP

One-Time Estimated Costs	\$140,000
Additional Annual Funding Required	\$1,139,000

Alternative 2 would remove the EMS/fire dispatch function from the existing county dispatch center and create a secondary public safety answering point (PSAP) that would exclusively serve EMS and Fire. To implement the secondary PSAP and operate the two PSAPs associated with Alternative 2, it is estimated that an \$8,657,000 one-time investment and an additional \$2,838,000 in annual recurring costs will be required, as shown in Table 13:

Table 13: Alternative 2 – Estimated Additional Costs for Operating Two PSAPs

	Primary PSAP (Sheriff)	Secondary PSAP (EMS/Fire)	Total
One-Time Estimated Costs	\$0	\$8,657,000	\$8,657,000
Additional Annual Funding Required	\$2,165,000	\$673,000	\$2,838,000

A summary of the additional annual funding required for each alternative is shown in Table 14:

Table 14: Estimated Recurring Cost Difference of Alternatives

	Existing PSAP	Alternative 1 Optimize PSAP	Alternative 2 Operate Two PSAPs
Annual Recurring Costs	\$5,116,000	\$6,255,000	\$7,954,000
Existing PSAP Annual Costs		<u>5,116,000</u>	<u>5,116,000</u>
Additional Annual Funding Required		\$1,139,000	\$2,838,000

Section 8 – Conclusion

In this report, we have provided two alternatives to improve the dispatching services provided to first responders in the County. By implementing the recommendations associated with one of the alternatives in this report, public safety dispatch services in Santa Barbara County will be better positioned to support the needs of emergency medical services (EMS), fire and law enforcement personnel, and the delivery of public safety services to the citizens of the County will be enhanced.

We wish to thank all of the project participants for the cooperation and input we have received during this study and we look forward to working with the stakeholders to implement the recommendations that are selected.