

# **Consolidation Feasibility Study of Public Safety Answering Points**

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**BUTTE COUNTY, CALIFORNIA**

**FINAL REPORT**



**May, 2016**

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## **1 Introduction and Executive Summary**

This chapter provides an introduction to our study, an executive summary, and table of recommendations.

### **1. INTRODUCTION**

The Matrix Consulting Group was retained by Butte County to conduct a consolidation feasibility study for seven Public Safety Answering Points (PSAP) in the County. After initial consultation Chico State withdrew participation leaving six dispatch agencies with a variety of characteristics. This report provides our evaluation, analysis, findings conclusions and recommendations. The report focuses on a wide range of issues including staffing, workload allocation, probabilities for success and other important issues. To develop this analysis the project team conducted an extensive number of internal and stakeholder interviews, collected detailed data, performed an employee survey, and remained in regular contact with the project coordinator in an effort to develop a comprehensive understanding of the County's varied dispatch operations.

This introduction and following executive summary provide a synopsis of the scope of work and overall context for the study, the methodologies used in evaluating dispatch services, and a summary of the recommendations made. The scope of work for the study included the following elements:

- Interviews with municipal and county management staff, county executive leadership, and police/sheriff and fire chiefs to understand key background issues that frame this study and scope of work.
- Interviews with various dispatch supervisory and line positions of the various PSAPs.

- Collection and review of data from a wide range of sources, to include electronic information (e.g. CAD) as well as cost, performance and statistical reports.
- Review of key documents such as operating policies, job descriptions, etc.
- Development of an employee survey and review with project steering committee members as an interim deliverable. This is included as a separate chapter in this report.
- Development of a preliminary issues list and review with project steering committee members as an interim deliverable. This is included in the appendix of this report.

Collectively, these steps were intended to provide the project team with a full understanding of the current methods of service delivery by the Butte County PSAPs to include their operations and the environment within which services are provided. This approach was further intended to ensure that participants have had relevant input into the study process.

## **2. EXECUTIVE SUMMARY**

To help frame decision-making for alternative approaches to Butte County dispatch service delivery, these *Four Framing Elements* are critical to understand and were instrumental in developing the analysis, findings, conclusions and recommendations contained within this report.

- **It is crucial to minimize delays in public safety service response for effective service delivery to the community.** As noted in detail throughout the body of this report, the impact in delivering timely public safety personnel and apparatus to a call for service scene can be critical. It should be considered an imperative service delivery goal, particularly with respect to the highest priority requests for service.
- **Highly-trained professional dispatchers employing consistent protocols are the ideal solution to effective public safety service delivery.** Those that make a full-time profession providing public safety dispatch services are typically the most well-trained and thus reliable dispatcher staff. There are assignment approaches in effect throughout the country which use part-time dispatchers positions, sworn staff on temporary assignment, and staff performing multiple assignments at a single duty station (i.e., concurrently dispatching fire, medical, EMS, and call-taking). While these models work, and by necessity must be used all of the time or part of the time in some (particularly smaller) locales, the ideal is

to deploy a fully-trained dispatcher professional able to focus on a few key service delivery tasks.

- **In an era of government fiscal constraint, taxpayers deserve highly effective dispatch services at the most reasonable cost.** Performing effective dispatch services at the most reasonable cost should be considered a vital priority. This requires careful balancing of operating costs against service level requirements, and also requires some of the most difficult decisions in a dispatch organization.
- **Operational changes from alternative dispatch delivery initiatives should have a net operational benefit to public safety services overall.** Determining “net” benefit is not only a quantitative effort but a qualitative effort. Agencies and customers with unique needs will judge these benefits differently. Nevertheless, it is important to attempt to articulate the “net benefit” from any operational or organizational change.

Based on these guiding principles, which represent four cornerstones of our analytical framework, the Matrix Consulting Group has provided organizational and operational modifications for Butte County dispatch service delivery. This feasibility study’s initial intentions were to identify opportunities to provide equal or better dispatch services at equivalent or less cost than the current independent dispatch centers. Unless these benefits could be demonstrated, there would be no substantive reasons to change current operations. Nevertheless, given the unique operating circumstances and requirements of all the public safety agencies participating in this study, this goal is not currently achievable. Rather, the best shorter-term solution that is practical is a consolidation option that likely enhances overall public safety service at a modest cost increase as described within the following findings and conclusions.

## **(1) Key Findings and Conclusions**

The following summarizes key findings and conclusions:

- County-wide consolidation of all PSAPs is not feasible given a variety of factors. These factors range from legislative restrictions on CalFire dispatch, to just purchased CAD software in Chico, to a BCSO perception that full consolidation is not in the best public safety interests of the County.
- A long-term vision of potential regionalized dispatch services may be practical given preliminary analysis suggests that such an agency could perform core dispatch services in Butte County with approximately 20% less line staff than current PSAP operations. There are, however, other ancillary workload issues that would require additional clerical staff resources at many public safety agencies, thereby hampering a possible staff-reduction pay-back.
- Based on all information available and the potential possibilities for other consolidation initiatives, the project team identified two consolidation scenarios worthy of more detailed analyses. These include:
  - Chico could feasibly provide consolidated dispatch solutions via contract to other agencies excluding BCSO and CalFire, and
  - The municipalities of Oroville, Paradise and Gridley have the same CAD and telephone systems. Given the technological commonalities and working relationship among these three agencies, consolidation opportunities for these agencies is explored, leaving Chico, BCSO and CalFire independent under current operational circumstances.
- A staffing analysis of each independent PSAP indicated a strong ability for these agencies to cost-effectively manage staff resources to complete required core and ancillary dispatch workloads. As such, each of these agencies is operated efficiently, thereby minimizing some of the potential benefits associated with most regionalized and consolidated dispatch operations. There are a few minor changes to staffing that can be considered at each PSAP, but these are not notable.
- The possibility of Gridley, Paradise and Oroville contracting with Chico for dispatch services does not demonstrate any notable benefits based on the analysis. This includes potential cost issues, addressing ancillary work performed by Gridley and Paradise, and other indicators shown in this consolidation option analysis. As a result, this contract arrangement cannot be considered a PSAP consolidation approach that would be demonstrably beneficial in the foreseeable future.

- Fully or virtually consolidating Gridley, Paradise and Oroville appears to be the most reasonable dispatch consolidation option in Butte County. While some annual costs would be incurred by the three agencies to make this effort work, representing approximately \$279,000 per annum to be proportionally allocated among them, there are public safety service level benefits, particular with regard to reducing the risks associated with single-dispatcher deployments.
- Gridley, Paradise and Oroville have many of the technological features in place and the working relationships such that a consolidation initiative could be accomplished in approximately eighteen months. This would be predicated on a detailed transition plan developed by these agencies.

These regional alternatives are explored and explained in greater detail in the accompanying report.

## **(2) Summary of Recommendations**

The following exhibit provides a list of the recommendations in this report as presented in order. The chapters in this report should be reviewed for a detailed discussion and analysis of each issue and the background behind each recommendation.

Under a non-consolidated operation, maintain existing authorized staffing levels at the Paradise PSAP.
Under a non-consolidated operation, maintain existing authorized staffing levels at the Butte County Sheriff's Office PSAP.
Under a non-consolidated operation, maintain existing authorized staffing levels at the Oroville PSAP.
Under a non-consolidated operation, adding one (1) full-time authorized dispatcher position to the Gridley PSAP would result in five (5) full-time staff, would provide the Department operational flexibility, and would normally provide 24/7 coverage capability; however, existing authorized full and part-time dispatchers with overtime expenditures can be managed to cover shifts.
Under a non-consolidated operation, maintain existing authorized staffing levels at the Chico PSAP.
Under a non-consolidated operation, eliminating one (1) full-time authorized dispatcher position from the CalFire PSAP would result in six (6) full-time staff who could provide 24/7 coverage capability. However, existing authorized full-time dispatcher positions cannot be considered excessive and thus this recommendation should only be considered under fiscally constrained situations.

APCO best-practice suggests accommodating staff turnover through over-hire initiatives. Each agency should consider this policy decision and if approved, staff their PSAPs according to over-hire information provided in this report.
Butte County dispatch agencies should further explore the provided PSAP best practices matrix and undertake various best management practice initiatives to become best-in-class dispatch service providers.
As public safety fiscal and operational changes take place in Butte County over the longer term, re-visit the potential quantitative and qualitative costs and benefits of a single regionalized dispatch center as circumstances dictate.
Cost/Benefit analyses suggest that Chico serving as a contract dispatch agency to Paradise, Gridley and Oroville does not result in any real net advantages to dispatch service delivery in Butte County, and as such should not be a consolidation option pursued further.
Cost/Benefit analyses suggest that further dispatch consolidation of Paradise, Gridley and Oroville would result in a net benefit to dispatch service delivery in Butte County based on various quantitative and qualitative factors, and as such should be a consolidation option to be implemented over the nearer term.
Equalize salary and benefits for Gridley, Oroville and Paradise staff in a consolidated agency through a renewed negotiation process and new collective bargaining agreement.
As part of a consolidated implementation strategy, develop a new bargaining unit and representation model for Gridley, Oroville and Paradise.
As part of consolidation transition, first determine the feasibility of using the existing Oroville facility as the consolidated agency location of choice. If deemed unsuitable, pursue other facility options.
As it relates to consolidation, develop a back-up dispatch center emergency protocol involving Chico or secondly Butte County Sheriff Office.
In the event full consolidation between Gridley, Oroville and Paradise is not possible, pursue Virtual Consolidation efforts as existing relationships and CAD software would help facilitate this approach.
Finalize the dispatch organizational structure including management, supervision and line job classifications using guidelines provided in this report.
Develop an ad-hoc committee of professional staff from Gridley, Oroville and Paradise to develop a comprehensive Project Implementation Plan for consolidation that would precede implementation of a consolidated agency. Anticipate approximately nine to twelve months for development of a final Plan that would address the multiple implementation issues, including the six key areas, raised in this report. The entire consolidation initiative should take approximately 18 months.
Identify a project manager from one of these agencies that serves on the consolidation transition project and task with executing a formal transition plan consistent with PMBOK principles.

Details regarding these recommendations can be found in the body of this report.



## **2 Profile of Butte County Dispatch Operations**

This chapter provides the profile of current dispatching operations for those participants in the Butte County Consolidation Feasibility study in Butte County, California.

### **1. INTRODUCTION**

The following data are based on interviews with fire, law enforcement and other key stakeholder personnel throughout the County, collection of key workload data and statistics, and review of available documents. The profile is organized as follows:

- Background and Incident-based Data
- Summary of Current Dispatching Agencies

The purpose of the descriptive profile is to document the Matrix Consulting Group's understanding of these Public Safety Answering Points' (PSAP) organizational structure, allocation of staff by unit and function, and principal assigned roles and responsibilities of staff. Data contained in the Profile were developed based on the work conducted by the MCG, including:

- Interviews with supervisory and staff positions on location at the PSAPs including managers, supervisors, and lead dispatchers.
- Interviews with numerous executive and political representatives of the involved agencies (e.g. Sheriff, CAO, etc.).
- Interviews with several executive level end-users of PSAP's services (e.g. Police and Fire Chiefs).
- Collection of various data describing organization and staffing, workload and service levels as well as costs.
- Documentation of key practices as that relates to work planning and scheduling, policies and procedures, as well as work processes.

This descriptive profile does not attempt to recapitulate all organizational and operational facets of Butte County's dispatch agencies. Rather, the profile reflects a summary of our understanding of the organizations, which prefaces other information provided in later chapters and serves as a foundation for understanding and is utilized as the basis for the development of consolidation alternatives. By understanding the general operations, staffing, and resources for the public safety agencies potentially impacted by dispatch consolidated options, alternatives can be devised. For contextual purposes, the first section below provides overall demographic information for the County.

**2. BUTTE COUNTY COVERS NEARLY 1,700 SQUARE MILES WITH A POPULATION OF APPROXIMATELY 224,000 RESIDENTS.**

The following table illustrates the population growth of Butte County, as well as noted municipalities in the County, over the past several years:

Year	2000	2010	2014 (est.)	15-Year % Change
Butte County	203,171	220,000	224,241	10.37%
Chico	59,954	86,187	89,180	48.75%
Paradise	26,408	26,218	26,449	0.16%
Oroville	13,004	15,546	16,220	24.73%
Gridley	5,382	6,584	6,578	22.22%

As shown above, the total County population has increased by over 10% in the past 15 years, with most of the growth occurring in the city of Chico.

**3. INCIDENT AND OTHER WORKLOAD IN BUTTE COUNTY.**

Based on dispatch-related workload such as incident and attendant calls for service data obtained from the respective dispatching agencies, the sections below summarize the overall annual (12 month) incident workload for law enforcement, fire, and EMS calls.

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Agency	Incidents		Telephone Calls				Radio Transmissions		
	Total Incidents	Avg. Disp Time	Incoming	Outgoing	Abandoned	Total	# of Trans	Avg. Time	Total Hours
BCSO	57,583	–	127,294	46,258	9,613	183,165	–	–	2,602
Oroville	47,016	4.59	62,567	25,731	2,749	91,047	–	–	–
Gridley	16,085	3.40	19,656	7,891	490	28,037	–	–	–
Chico	78,399	3.29	152,795	62,222	8,142	223,159	598,404	–	–
Paradise	20,342	6.70	53,781	16,547	1,332	71,660	144,173	0.32	761
CalFire	18,726	–	59,109	25,972	72	85,153	–	–	–

As shown above, the core dispatch-related workloads for the various Butte County PSAPs vary significantly dependent upon the agency. In totality, the dispatch agencies in this study handled in the reported time period:

- 176,700 incidents per year.
- Receive 487,600 telephone calls per year.
- Initiate 184,600 telephone calls per year.
- Handle a variety of ancillary duties as described subsequently.

#### **4. SUMMARY OF DISPATCH AGENCIES SERVING BUTTE COUNTY.**

To provide emergency communications and dispatching service to the local public safety agencies in Butte County, there are seven (7) separate public safety dispatch agencies within the County, including the following:

- Gridley.
- Cal State Chico.
- Paradise.
- Oroville.
- Butte County Sheriff's Office.
- Chico.
- CalFire.

The summary of their respective organization, operation, and services are included in the table below. Cal State Chico has chosen not to participate in the consolidation study and as such is not summarized in the following matrices. Furthermore, the matrices do not include privatized dispatch agencies performing medical dispatch services.

Department	Summary of Organization / Operation	Summary of Dispatch Services
Gridley Police Department	<p>Total dispatch staffing consists of following authorized positions:</p> <p><u>Authorized Staffing</u>  (4) full-time dispatchers  (3) part-time dispatchers (Days only)</p> <p>(2) Sergeants, (1) Officer and (1) IT Manager are dispatchers certified.</p> <p><u>Actual Staffing</u>  (3) full-time dispatchers  (3) part-time dispatchers</p> <p>Hours of operation (12-hr shift) operating 3-4; 4-3 shift program that rotates every 3 months:</p> <ul style="list-style-type: none"> <li>• 0600 – 1800 hours</li> <li>• 1800 - 0600 hours</li> </ul> <p>The center consists of 1 dispatching stations with one (1) position round the clock deployed Mon-Sun. Staff are overseen by the Police Chief.</p> <p>Uses RIMS CAD software.</p>	<p>Serves as the primary Public Safety Answering Point for the city of Gridley and contract services to Biggs. Dispatches and supports law enforcement directly and transfer fire/EMS to CalFire.</p> <p>Provide 24/7 dispatching services and Records services.</p> <p>A substantial portion of time is dedicated to Records-related support functions to include but not be limited to: 24/7 front counter service; mail; vehicle impounds; sex offender registration; gang registration; warrants; CCWS permits; 311 phone; jail cameras; Chief correspondence; 911 community education and events; CLETS/NLETS administration and other administrative support.</p>

Department	Summary of Organization / Operation	Summary of Dispatch Services
Paradise Police Department	<p>Total dispatch staffing consists of following positions:</p> <p><u>Authorized Staffing</u>            (1) Dispatch Supervisor            (6) full-time dispatchers            (3) part-time dispatchers            (1) 7<sup>th</sup> Dispatch position “frozen.”</p> <p><u>Actual Staffing</u>            (1) Dispatch Supervisor            (6) full-time dispatchers            (3) part-time dispatchers (1 is F/T BCSO dispatcher)            (1) Dispatch position “frozen.”</p> <p>Hours of operation (12-hr shift) operating 2/3/2/2/3/2 (14-day) shift program that rotates every 4 months:            • 0600 – 1800 hours (2 staff + supv)            • 1100 – 2300 hours (2 staff)            • 1800 – 0600 hours (2 staff)</p> <p>The center consists of 2 dispatching stations with staff deployed Mon-Sun as shown above. Staff are overseen by the Supervisor and sergeant(s) in her absence.</p> <p>Uses RIMS CAD software.</p>	<p>Serves as the primary Public Safety Answering Point for the Town of Paradise. Dispatches and supports law enforcement and animal control directly and transfer fire/EMS to CalFire.</p> <p>Provide 24/7 dispatching services and various administrative services.</p> <p>Reasonable percentage of time is dedicated to Records-related support functions to include but not be limited to: Scans/reviews/routes cases; scans/processes citations; serialized pawn slip entry; restraining order processing; FI cards entry; public works page-outs; CLETS/NLETS administration and front desk support from 3 pm – 5pm and from 8 am – 9am.</p>

Department	Summary of Organization / Operation	Summary of Dispatch Services
Oroville Police Department	<p>Total dispatch staffing consists of following authorized positions:</p> <p><u>Authorized Staffing</u> (9) full-time dispatchers</p> <p><u>Actual Staffing</u> (9) full-time dispatchers (3) Municipal Law Enforcement Officers (MLE) cross-trained (2) Community Services Officers (CSO) cross-trained.</p> <p>Hours of operation (10-hr shift) operating on a 4-day shift program. Will extend to 12-hours flex, if necessary.</p> <ul style="list-style-type: none"><li>• 0600 – 1600 hours</li><li>• 1000 – 2000 hours</li><li>• 1600 – 0200 hours</li><li>• 2000 – 0600 hours</li><li>• 0000 – 1000 hours</li></ul> <p>The center consists of 3 dispatching stations with staff deployed Mon-Sun as shown above. Staff are overseen by the shift sergeants on Patrol.</p> <p>Uses RIMS CAD software.</p>	<p>Serves as the primary Public Safety Answering Point for the City of Oroville and provides dispatch contract services to the El Medio Fire District and Feather Falls Casino.</p> <p>Provide 24/7 dispatching services for police, fire and emergency medical in these service areas.</p> <p>Dispatchers perform varied ancillary duties in addition to dispatch services to include but not be limited to: Pawn slip entry; traffic citation entry; camera monitoring throughout city (~40 at city hall, parks, intersections, etc.) and CLETS/NLETS administration. Will provide, upon request, various comprehensive records searches on field contacts for patrol officers.</p>

Department	Summary of Organization / Operation	Summary of Dispatch Services
Butte County Sheriff's Office	<p>Total dispatch staffing consists of following authorized positions:</p> <p><u>Authorized Staffing</u>            (1) Dispatch Supervisor            (2) Lead Dispatchers            (8) Dispatchers            (4) Part-time Dispatchers</p> <p><u>Actual Staffing</u>            (1) Dispatch Supervisor            (2) Lead Dispatchers            (7)* Dispatchers            (2)* Part-time Dispatchers</p> <p>Hours of operation (12-hr shift) operating 3/2/3/3/2/2 (14-day) shift program.</p> <ul style="list-style-type: none"> <li>• 0600 – 1800 hours</li> <li>• 0700 – 1900 hours</li> <li>• 1200 – 0000 hours (flex)</li> <li>• 1800 – 0600 hours</li> <li>• 1900 – 0700 hours</li> </ul> <p>The dispatch supervisor works a five-day week, 0700-1500 M-F. In the absence of leads or the supervisor, a sergeant will provide indirect supervision.</p> <p>The center consists of 5 dispatching stations with staff deployed Mon-Sun as shown above.</p> <p>Uses Data 911 CAD software.</p> <p>*Two full-time and one part-time in training.</p>	<p>Serves as the primary Public Safety Answering Point for the Sheriff serving Butte County unincorporated areas. Provides 24/7 dispatching services for law enforcement in this service area. Also provides dispatch to varied supporting (regional) units such as Search &amp; Rescue; Jail and Transport; BINTIFF (Narc. Task Force); and provides frequency to Parole, Probation and Fish &amp; Wildlife, as necessary. Transfer fire/EMS to CalFire and transfers vehicle accidents, traffic-related issues to CHP or appropriate police agency.</p> <p>Dispatchers perform varied ancillary duties in addition to dispatch services to include but not be limited to: restraining order entry; warrants checks; stolen property entry; towed/recovered vehicle processing; teletype sending and CLETS/NLETS administration.</p>

Department	Summary of Organization / Operation	Summary of Dispatch Services
Chico Police and Fire Department	<p>Total dispatch staffing consists of following authorized positions:</p> <p><u>Authorized Staffing</u>            (1) Communications/Records Mgr.            (4) Dispatch Supervisors            (18) Dispatchers            (1) Part-time Dispatcher</p> <p><u>Actual Staffing</u>            (1) Communications/Records Mgr.            (4) Dispatch Supervisors            (14) Dispatchers (1 is on medical leave).            (1) Part-time Dispatcher</p> <p>Hours of operation is 4/10 and 3/12.5 Schedule program.  <u>Mon-Thr 4/10 Plan:</u></p> <ul style="list-style-type: none"> <li>• 0630 – 1630 hours</li> <li>• 0700 - 1700 hours</li> <li>• 1000 – 2000 hours</li> <li>• 1500 - 0100 hours</li> <li>• 1700 – 0300 hours</li> <li>• 1500 - 0100 hours</li> <li>• 1700 – 0300 hours</li> <li>• 2030 - 0630 hours</li> <li>• 2100 – 0700 hours</li> </ul> <p><u>Fri-Sun 3/12.5 Plan:</u></p> <ul style="list-style-type: none"> <li>• 0630 – 1830 hours</li> <li>• 1000 – 2030 hours</li> <li>• 1600 - 0430 hours</li> <li>• 1800 - 0630 hours</li> <li>• 1830 - 0700 hours</li> </ul> <p>Two of the dispatch supervisors works the 4/10 beginning at 0700 and 1600 hours and two the 3/12.5 at 0600 and 1800. Mon-Thr 0200-0700 supervision reverts, as needed, to sworn staff.</p> <p>The center consists of call-taking and dispatching stations with at least one Fire and one PD station assigned 24/7. Third position will usually be call-taker, as staffed.</p> <p>Uses Sungard CAD software.</p>	<p>Serves as the primary Public Safety Answering Point for the City of Chico Police, Animal Control and Fire Departments. Does not perform EMD screening; transfers calls to privatized ambulance and dispatches Fire concurrently. Provides dispatch to varied supporting city agencies such as code enforcement, park rangers, and public works and utilities on weekends.</p> <p>Dispatchers perform varied ancillary duties in addition to dispatch services to include but not be limited to: pawn slips; missing persons; Field Interview cards; traffic accident exchange form; handling citizens who come into the police department front counter after hours and weekends; restraining order entry. stolen/towed/recovered vehicle processing; active warrant CLETS and data entry; CLETS/NLETS administration.</p>



Department	Summary of Organization / Operation	Summary of Dispatch Services
CalFire	<p>Total dispatch staffing of the Emergency Command Center consists of following authorized positions:</p> <p><u>Authorized Staffing</u>  (5) Captains  (7) Communications Operators</p> <p><u>Actual Staffing</u>  (5) Captains  (3.5) Communications Operators</p> <p>Staffing plan is minimum two (2) personnel with one person awake at all times.</p> <ul style="list-style-type: none"> <li>• Captains on 72-hr schedule</li> <li>• Dispatchers on 12-hour shifts on 4/3/3/4 schedule.</li> </ul> <p>Uses Altares CAD software.</p>	<p>Provides 24/7 dispatching for fire suppression and EMD for various agencies in Butte County to include:</p> <ul style="list-style-type: none"> <li>• Town of Paradise.</li> <li>• City of Gridley and Biggs.</li> <li>• Butte County.</li> </ul> <p>Provides fire suppression/medical service as Butte County Cooperative Fire Agencies to include the unincorporated areas of Butte County, the cities of Biggs and Gridley and the Town of Paradise.</p> <p>Acting as a secondary PSAP and Emergency Command Center, CalFire can provide contracted services related to dispatch and fire-related services but cannot abrogate such responsibilities to another agency, including a regionalized dispatch center.</p>

The above information serves as the underpinnings for consolidation feasibility as each agency's operational profile can contribute to, or be a possible impediment, to consolidation opportunities discussed in the following chapters.

### **3 PSAP Employee Survey Results**

As part of the Matrix Consulting Group's study of the potential for consolidation among 911 dispatch agencies in Butte County, the project team distributed a survey to the employees of the involved agencies to gauge their opinion on a number of topics related to dispatch operations in the County and the potential consolidation. This report summarizes the results of the survey.

#### **1. INTRODUCTION**

The survey was divided into four sections.

- The first section asked respondents to provide some information about their position, tenure, and agency of employment.
- The second section asked them to respond to indicate their level of agreement with several statements about their agency and indicate how they perceive their workload.
- The third section asked them to rank their level of concern about various aspects of potential agency consolidation.
- The fourth section allowed them to express in their own words their opinions about the benefits and drawbacks to the potential consolidation.

The survey was distributed via SurveyMonkey in December, 2015. A total of 21 responses were initially received by the deadline, and which the following results are based upon. We were specifically asked to allow CalFire an extension after these results were written and an additional 10 responses were received specifically from that agency. As such, if the CalFire result demonstrates a different response pattern, it will be noted herein.

While responses to the survey were confidential, the project team asked respondents to provide some demographic information about themselves for data

analysis purposes. The tables below outline the responses of survey participants to these questions.

POSITION TYPE	
Position Type	% Responses
Dispatch Line Personnel	71%
Manager/Supervisor/Support	29%
YEARS OF SERVICE	
Years of Service	% Responses
Less than 5 years	24%
5-10 years	29%
More than 10 years	48%
AGENCY OF EMPLOYMENT	
Agency	% Responses
BCSO	24%
Chico	52%
Oroville	5%
Gridley	0%
Paradise	19%
CalFire	See footnote <sup>1</sup>

It should be noted that the 21 original total responses is a small volume for a survey of this size. With the requested extension provided to CalFire, the additional 10 responses for a total of 31 still result in an overall poorer response rate. In addition, one of the receiving agencies provided zero responses, and another agency provided only one. Because of the survey's response dynamics, including a potential skewing of overall results due to CalFire's delayed results, the survey's conclusions cannot necessarily be deemed representative of employees across the County's dispatch agencies.

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<sup>1</sup> CalFire requested an extension after these results were written and an additional 10 responses were received specifically from that agency. As such, the survey numeric provided will not be altered (as given the response rate representing 1/3<sup>rd</sup> of all responses it would also skew overall viewpoints), If the CalFire result demonstrates a significantly different response pattern, it will be noted in the narrative.

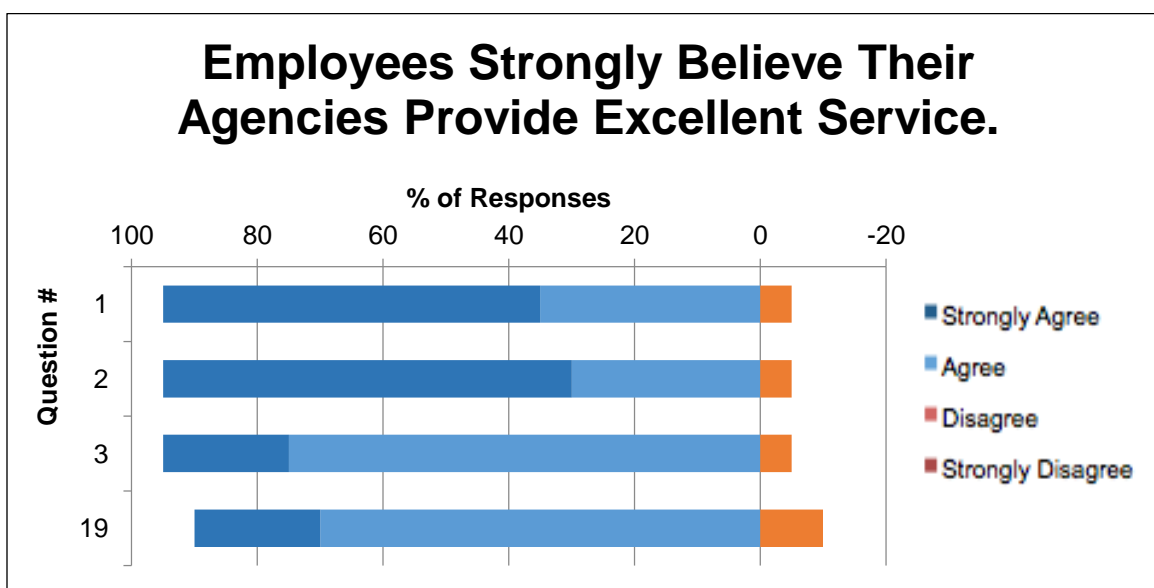
## 2. MULTIPLE CHOICE STATEMENT RESPONSES

The second section of the survey asked respondents to indicate their level of agreement or disagreement with thirty-three (33) statements. The response options were “strongly agree” (coded SA in the following tables), “agree” (A), “disagree” (D), and “strongly disagree” (SD). Respondents could also choose “No Opinion”.

### (1) Employees Overwhelmingly Feel that Dispatch Agencies in Butte County Provide a High Level of Service to Public Safety Agencies and the Community.

The statements in the table below addressed the level of service provided to the public safety agencies and residents of Butte County.

LEVEL OF SERVICE TO COMMUNITY					
Statement	SA	A	D	SD	No Opinion
1. My dispatch agency provides a high level of service to our public safety partners.	60%	35%	5%	0%	0%
2. My dispatch agency provides a high level of service to our community.	65%	30%	5%	0%	0%
3. Overall, Butte County dispatch agencies provide effective service to all Butte County residents.	20%	75%	5%	0%	0%
19. The residents of Butte County benefit from the current methods of public safety dispatch.	20%	70%	10%	0%	0%

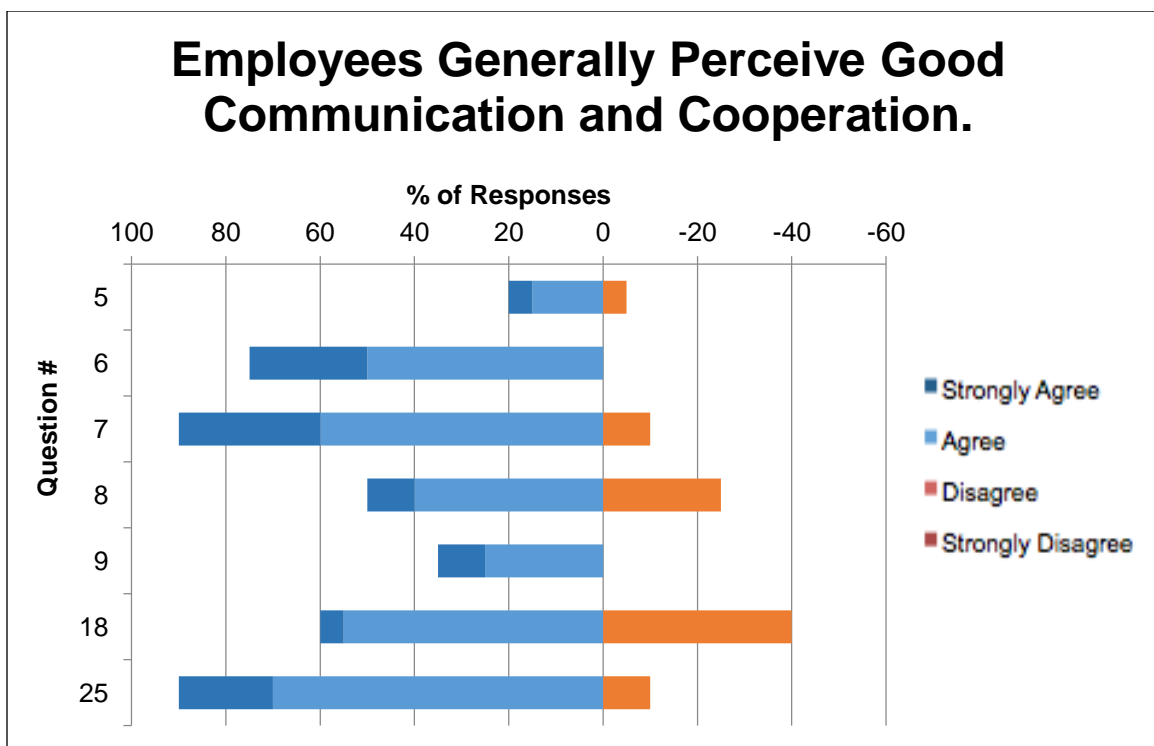


As the table and chart above show, responding employees overwhelmingly agreed that their dispatch agencies, and in fact all dispatch agencies in general within the County, provide a high level of service to public safety agencies and the residents of the County. However, a few of the CalFire respondents (22%) strongly disagreed that overall Butte County dispatch was effective.

**(2) Employees Generally Believe that There Is Good Communication and Cooperation Between Dispatch Agencies and Public Safety Agencies.**

The statements in the table below focused on the effectiveness of communication and cooperation between dispatch agencies and public safety agencies.

AGENCY COMMUNICATION & COOPERATION					
Statement	SA	A	D	SD	No Opinion
5. The dispatch agencies using RIMS CAD software work well together.	5%	15%	5%	0%	75%
6. The cities dispatch agencies work well together.	25%	50%	0%	0%	25%
7. The cities and Sheriff's office dispatch agencies work well together.	30%	60%	10%	0%	0%
8. The cities and CalFire dispatch agencies work well together.	10%	40%	25%	0%	25%
9. The Sheriff and CalFire dispatch agencies work well together.	10%	25%	0%	0%	65%
18. As necessary, current technologies allow us to interface with our counterpart agencies to effectively dispatch public safety services.	5%	55%	40%	0%	0%
25. We have a formal dispatch back-up protocol in the event our dispatch agency is out-of-service.	20%	70%	10%	0%	0%



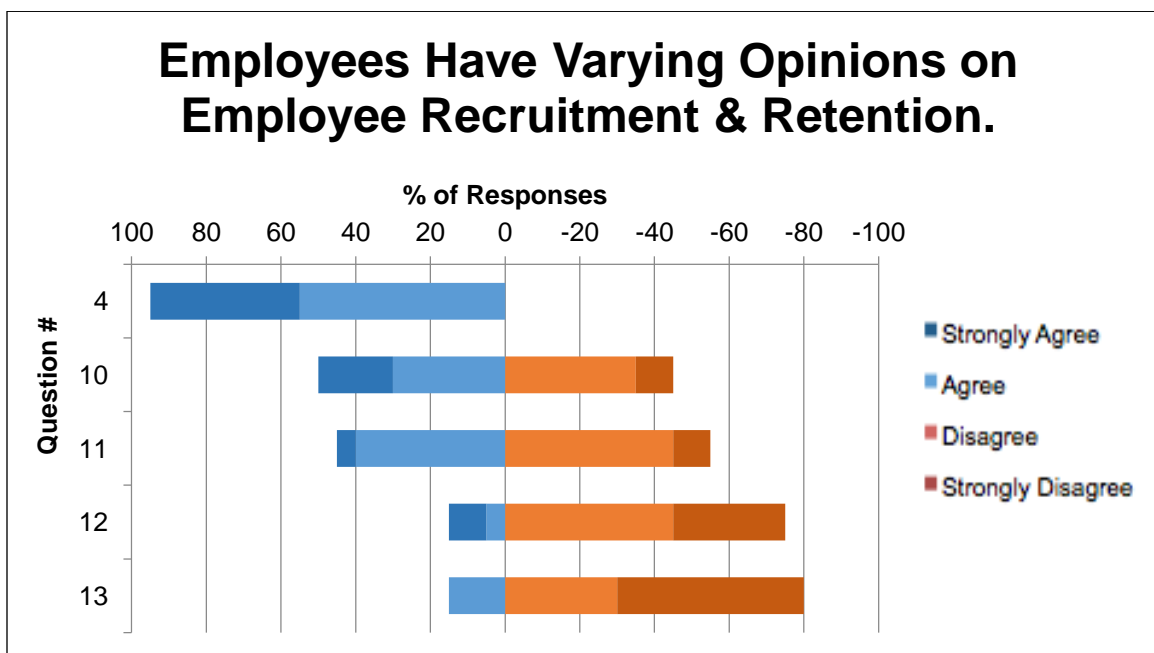
- Statements in this section received generally strong agreement, with all but one gathering at least twice as much agreement and strong agreement as disagreement.
- Statement #18 received more agreement than disagreement. While 71% of line dispatchers agreed or strongly agreed, opinions were different among managers and support staff, where 33% agreed and 67% disagreed.

The responses to these statements show that the responding employees generally believe there is good communication between dispatch agencies and public safety agencies. While many respondents did not express an opinion on CAD software or the cooperation between the County Sheriff and CalFire, a number of responses to other statements showed that communication is seen as an area of strength for dispatchers in the County. The lone area of disagreement was among managers and support staff when asked if their technology facilitates effective interfacing with other agencies.

**(3) Employees Have Mixed Opinions About Their Agencies' Recruitment Efforts and Do Not Feel They Are Fairly Compensated. They Believe, However, that Their Agencies Generally Retain Employees Well, and They Plan to Stay Long-Term.**

The statements in the table below deal with dispatch agencies' ability to recruit and retain employees, as well as employees' perceptions on compensation and their plans to make a career at their agency.

EMPLOYEE RECRUITMENT & RETENTION					
Statement	SA	A	D	SD	No Opinion
4. I'm intending to make a career at my dispatch agency.	40%	55%	0%	0%	5%
10. We do a good job recruiting qualified applicants and take the appropriate steps to hire the best suited candidate.	20%	30%	35%	10%	5%
11. Our agency does a good job retaining qualified applicants.	5%	40%	45%	10%	0%
12. We regularly lose dispatch staff to other dispatch agencies in Butte County.	10%	5%	45%	30%	10%
13. Our entire compensation package (salary and benefits) is fair and equitable compared to most dispatch agencies.	0%	15%	30%	50%	5%



- Every respondent agreed or strongly agreed with Statement #4, that they plan to make a career at their agency. And only 15% agreed or strongly agreed with

Statement #12, that they regularly lose employees to other agencies in the County.

- Responses were mixed on Statement #10 and #11, regarding recruitment and retention. A majority (of 64% and 82% respectively) of employees in Chico disagreed or strongly disagreed with both of these statements, while other agencies produced a majority (of 75% and 88% respectively) of agreement or strong agreement to both statements.
- A strong majority (80%) of employees disagreed with Statement #13, that compensation packages are fair and equitable.

The employees who responded to these statements intend to be at their agencies for a long time, with 95% indicating that they plan to make a career of it. When asked about retention, responses varied. Most employees said that their agency does not lose dispatch staff to other Butte County dispatch agencies, but only half of them agreed that their department does a good job of retention. This may suggest that they feel many dispatchers are lost to agencies outside the County, or to other career paths. Recruitment was a divided issue, with employees in Chico especially expressing their dissatisfaction with the agency's ability to acquire new talent, while staff in other agencies leaned toward more positive responses.

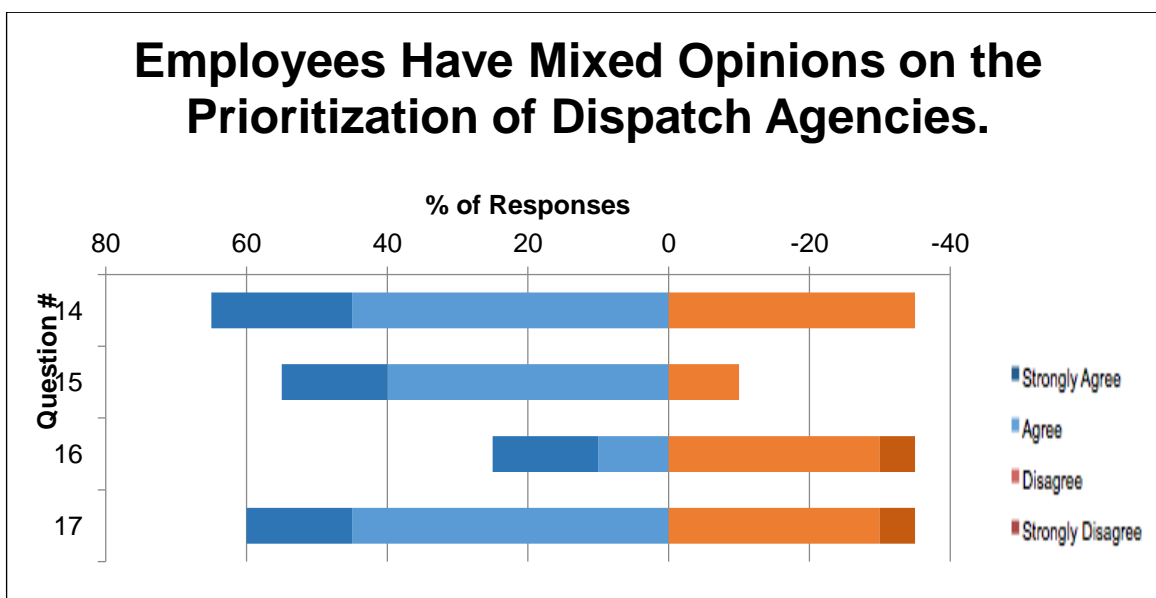
The pay and compensation packages were a source of nearly unanimous negativity, with 80% of staff across agencies and organizational levels stating that the packages in their agencies are not fair and equitable compared to most dispatch agencies.

**(4) Employees Have Mixed Opinions on the Way Dispatch Agencies Are Provided for and Prioritized.**

The statements in the table below addressed the way that dispatch agencies in Butte County are prioritized and provided for.



PRIORITIZATION OF DISPATCH AGENCIES					
Statement	SA	A	D	SD	No Opinion
14. Law enforcement dispatch services are well provided for in this county.	20%	45%	35%	0%	0%
15. Fire suppression dispatch services are well provided for in this county.	15%	40%	10%	0%	35%
16. Emergency medical dispatch services are well provided for in this county.	15%	10%	30%	5%	40%
17. Given our agency's dispatch processes, law enforcement and Fire/EMS dispatch receive equally important attention.	15%	45%	30%	5%	5%



- Statement #14, regarding provision for law enforcement agencies received, nearly twice as much agreement and strong agreement as disagreement. Disagreeing responses were evenly spread among responding agencies and between managerial and line staff.
- Both Statement #16 and #17 received 7 disagreeing or strongly disagreeing responses. For both statements, 6 of the 7 disagreeing responses came from employees in Chico. Many of the respondents who agreed with Statement #17 chose “no opinion” on Statement #16.

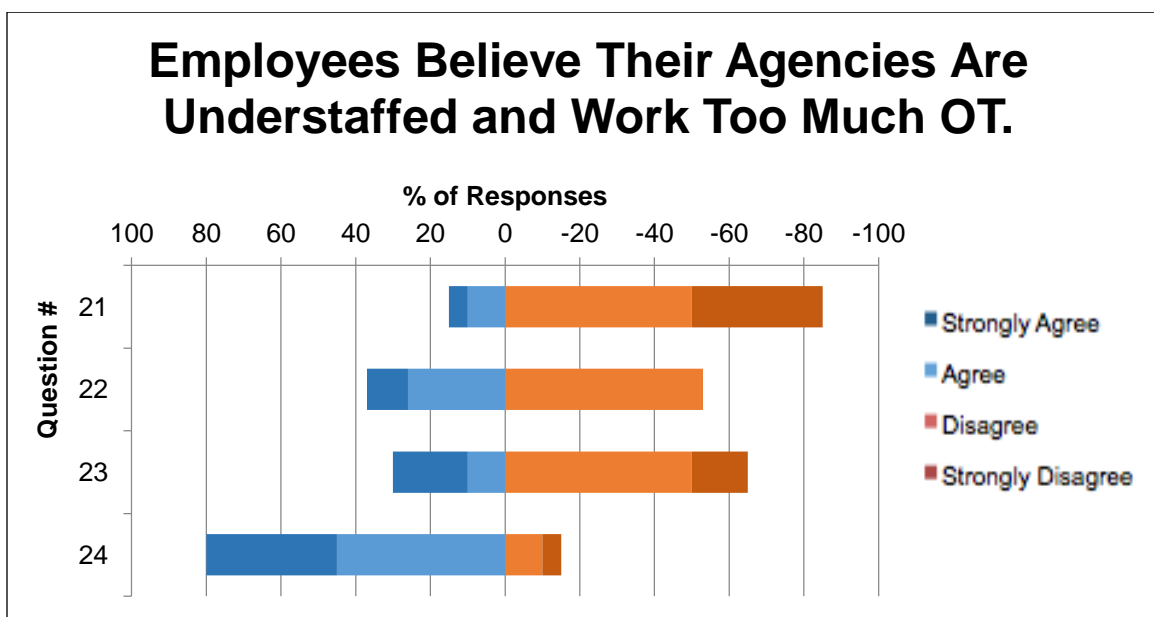
The responses to these statements show that employees generally believe law enforcement and fire agencies are well cared for, although a few staff who declined to comment on fire agencies expressed concern about provision for law enforcement. Of staff who did opt to respond to Statement #16, very few agreed that EMS agencies are

well provided for, indicating that there is a perceived inequity in the treatment of different types of public safety agencies. While Statement #17 received more agreement than disagreement about the equitable treatment of agencies, the exact same number of disagreeing and strongly disagreeing responses was received, suggesting that there is a contingent of staff who firmly believe otherwise.

**(5) Employees Believe Their Agencies Are Understaffed and Work Too Much Overtime.**

The statements in the table below focused on the adequacy of staffing and the amount of overtime worked at the County's dispatch agencies.

STAFFING & OVERTIME					
Statement	SA	A	D	SD	No Opinion
21. My dispatch agency is adequately staffed.	5%	10%	50%	35%	0%
22. I personally work too much voluntary overtime.	11%	26%	53%	0%	11%
23. I personally work too much mandated overtime.	20%	10%	50%	15%	5%
24. Our agency works too much overtime.	35%	45%	10%	5%	5%



- A total of 85% of respondents disagreed or strongly disagreed with Statement #21, that their agency is adequately staffed. While 2 of the 3 respondents from

Paradise agreed, 100% of Chico's respondents and 80% of BCSO's respondents disagreed.

- Statements #22 and #23 both received a majority of disagreeing responses, indicating that most employees do not feel they personally work too much overtime. 3 of 4 respondents from BCSO agreed with Statement #22, but they all disagreed with #23 – they feel that they work too much voluntary overtime but not too much mandated overtime. Chico's respondents were the opposite; two-thirds of them disagreed with #22, but more than half of them agreed with #23.
- Statement #24, regarding the amount of overtime worked by the agency, was met with widespread (near unanimous) agreement.

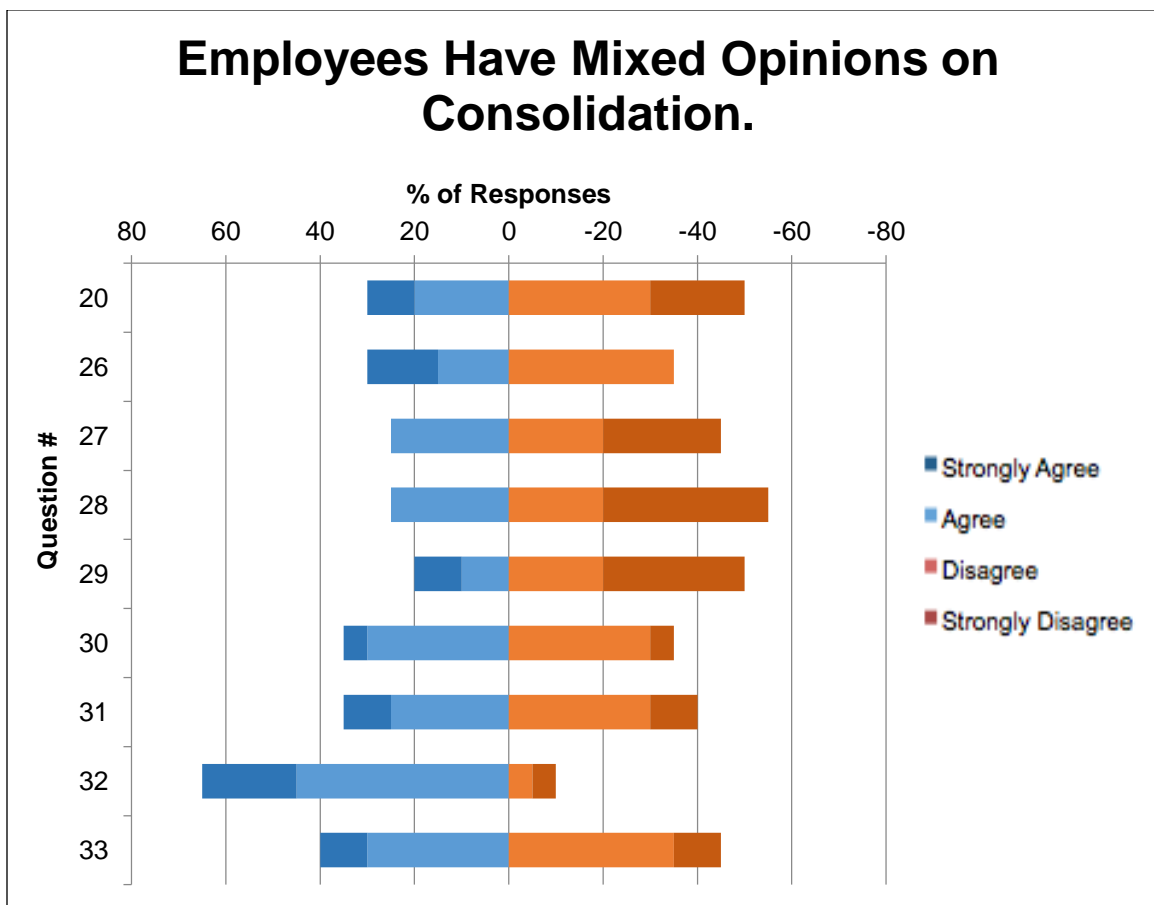
The large majority of dispatch staff in Butte County, other than the employees in Paradise, believe that their agency is adequately staffed. And nearly every respondent believes that his or her agency is working too much overtime. When asked whether they personally are working too much overtime, however, responses became more nuanced. A large number of Chico's staff believe they work too much mandatory overtime, while BCSO employees tend to believe they work too much voluntary overtime.

**(6) Employees Have Mixed Opinions on Consolidation, But They Would Like to See Options Other than a Single Consolidated Agency Explored.**

The statements in the table below specifically deal with respondents' opinions on the potential consolidation and its impact on various aspects of service provision in the County.

CONSOLIDATION					
Statement	SA	A	D	SD	No Opinion
20. Some form of dispatch consolidation would provide enhanced benefit in Butte County.	10%	20%	30%	20%	20%
26. Consolidation will impact me negatively.	15%	15%	35%	0%	35%
27. Some form of consolidation is preferred to existing dispatch operations in Butte County.	0%	25%	20%	25%	30%
28. Consolidation at one facility is better than continued "separate" operations.	0%	25%	20%	35%	20%
29. Consolidation would, overall, benefit all dispatch employees in Butte County.	10%	10%	20%	30%	30%
30. Consolidation would reduce service levels to the citizens we presently serve.	5%	30%	30%	5%	30%

CONSOLIDATION					
Statement	SA	A	D	SD	No Opinion
31. Consolidation would reduce service levels to our public safety partners we presently serve.	10%	25%	30%	10%	25%
32. Consolidation options, other than one large regional dispatch agency, should be explored first.	20%	45%	5%	5%	25%
33. Consolidation options should not be explored for Butte County.	10%	30%	35%	10%	15%



- Statements #20, #27, #28, and #29 all dealt with whether consolidation would be beneficial overall to the County and dispatch employees, and whether it would be preferable to the existing situation. BCSO's respondents provided nearly all of the agreeing responses to Statement #20 (where they agreed unanimously) and more than 50% of the responses to #27, #28, and #29. Other agencies were almost completely in disagreement with these statements.
- In addition, managerial and support staff were almost entirely (more than 75%) in agreement with Statements #20, #27, #28, and #29, while line staff agreed at a rate of no more than 20% to any of those statements.

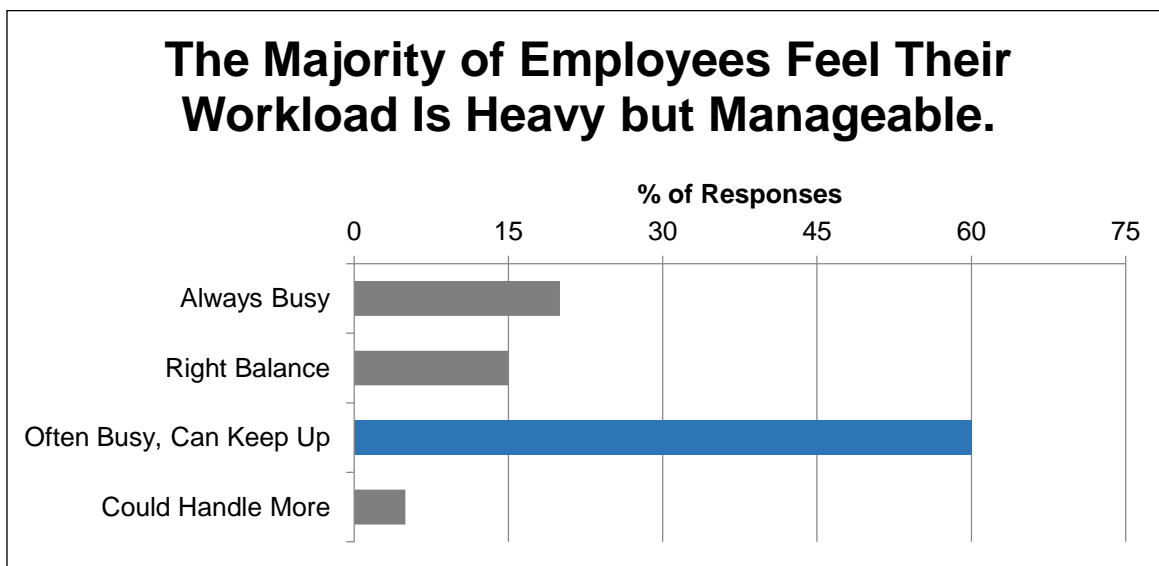
- Employees were split on whether consolidation would impact them negatively personally in Statement #26. No managerial staff believed that it would be a problem for them, while 60% of line staff expressed concern.
- Statement #30 and #31 produced split opinions on the impact of consolidation on the level of service provided to public safety agencies and County residents. A slight majority of line staff agreed with both statements, while 3 of 4 responding managerial and support staff disagreed with both statements.
- Nearly everyone agreed with Statement #32, that multiple consolidation options other than a single large regional agency should be explored.
- Responses were split on Statement #33, that “consolidation options should not be explored for Butte County”. Managerial/support staff and line staff were equally split. BCSO respondents tended to disagree more than other agencies, indicating that they want to see consolidation options explored.

From the responses to this set of statements, a number of key themes emerged. Staff have mixed opinions about consolidation, but the opinions fall along consistent lines. BCSO staff are more open to exploring consolidation, and managers/support staff see fewer negative repercussions than line staff dispatchers. All respondents can agree that seeking out alternative consolidation solutions to a single centralized agency is ideal before moving forward. And interestingly, CalFire has a different overall opinion regarding consolidation, with over one-half indicating that dispatch consolidation options should not be explored at all.

**(7) The Majority of Employees Feel Their Workload Is Heavy but Manageable.**

The final multiple choice question asked employees to choose from four statements describing their current workload. The statements and their responses are depicted in the table and chart below.

WORKLOAD PERCEPTION	
Statement	% Responses
I am always busy and can never catch up.	20%
I have the right balance of work and time available.	15%
I am often busy but can generally keep up.	60%
I could handle more work given the available time.	5%



As the responses to this question make clear, most staff believe that their workload is heavy, but that they can generally keep up. No agency differed to a statistically significant degree from this trend. Managerial/support staff were split 50% between saying that they are “often busy but usually able to keep up” and “always busy and unable to keep up”. CalFire did not have a response registered in the “Could Handle More” work category, and indicated a slightly higher level of “busyness” compared to their counterparts.

### **3. CONCERNS REGARDING POTENTIAL CONSOLIDATION**

The third section of the survey provided respondents with 13 potential concerns about consolidating dispatch agencies and asked respondents to rank the ones that were of the greatest concern for them from 1-5. The following table and chart show how many respondents ranked each concern at each level and provides a weighted total of rankings for each potential concern.

CONCERNS REGARDING POTENTIAL CONSOLIDATION						
Concern	Rank					Weighted Total
	1	2	3	4	5	
Difficulty integrating and standardizing Standard Operating Practices and Policies & Procedures for joint dispatch operations.	3	6	2	2	1	<b>50</b>
Difficulty blending different operating cultures.	4	1	3	3		<b>39</b>
Difficulty addressing different compensation packages and related issues.	2	3	3	1	2	<b>35</b>
Difficulty developing a good organizational structure that will meet our collective needs (number of supervisors, number of dispatchers, etc.).	3	2		2	7	<b>34</b>
Difficulty cross-training staff given widely varied services provided by the dispatch agencies.	2	3	3		2	<b>33</b>
Difficulty in giving up the actual or perceived advantages of remaining an independent dispatch agency.	4			5	2	<b>32</b>
Difficulty integrating various CAD and other technologies.		2	1	1		<b>13</b>
Difficulty in convincing the communities we service that consolidation is beneficial.	1		1	1	2	<b>12</b>
Difficulty in addressing other workloads performed by dispatchers other than E911 dispatch/call-taking.			3	1	1	<b>12</b>
Difficulty in developing a dispatch operations cost-sharing plan that will be perceived as fair by dispatch public safety customers.			2	2		<b>10</b>
Difficulty in convincing the political representatives of our communities that consolidation is beneficial.	1	1				<b>9</b>
Difficulty in convincing our law enforcement public safety partners that consolidation is beneficial.	1			1	2	<b>9</b>
Difficulty in convincing our fire public safety partners that consolidation is beneficial.		1	1			<b>7</b>

As the table above shows, there are six (6) things that employees consistently ranked as major concerns regarding the potential consolidation. Foremost among them was the process of standardizing operational practices and procedures. 14 out of 19 respondents to this section ranked this as one of their top 5 concerns. Indeed, when including the CalFire response one-half of the respondents ranked SOPs and P&Ps as either their first or second greatest concern. Other common concerns were the blending of operational cultures, addressing compensation packages, settling on an appropriate organizational structure, cross-training staff, and overcoming the perceived disadvantage of sacrificing agency independence.

#### **4. OPEN-ENDED QUESTION RESPONSES**

The final section of the survey asked respondent to explain in their own words what they felt the key benefits and drawbacks would be to a consolidated County dispatch agency.

##### **(1) Staff See Economies of Scale as the Primary Benefit of a Potential Consolidation.**

When asked what employees felt would be the greatest advantages to consolidation, the following themes were present in their responses:

- Larger pool of dispatchers available (3 responses)
- Centralized communication (3 responses)
- Combined countywide expertise (3 responses)
- Improved training
- Standardized pay and benefits

The advantages that employees perceive to a potential consolidation mostly relate to the logistical and administrative advantages of increasing the size of the available staffing pool and centralizing/standardizing the agencies' operations and the support provided to dispatchers. Improving the level of combined expertise was also mentioned, as was the opportunity for improved professional training.

##### **(2) Employees Believe that Painful Adjustments to Staff Requirements Present the Greatest Disadvantage to Consolidation.**

When employees were asked what they perceived to be the greatest disadvantages of potential consolidation, the following responses were received:

- Lack of familiarity with County geography (3 responses)
- Reconciling agency operating cultures (3 responses)
- Loss of familiarity with individual public safety agencies (3 responses)
- Staff adjustment from varying levels of call volume
- Adapting to a countywide 10 code system



The concerns expressed by staff primarily related to the impact on dispatch staff, from their ability to familiarize themselves with the entirety of Butte County geographically to the loss of frequent contact with localized public safety agencies and the difficulty of reconciling widely varying agency operating cultures. It was also mentioned that staff may have trouble adapting to a standardized code system and handling a high call volume if they come from a dispatch agency that does not currently experience high call volumes.

## **5. CONCLUDING REMARKS**

Few participants chose to offer open-ended narrative responses. Consequently there are no concluding remarks on the part of survey participants that can be deemed significant.

## **4 Guidelines for Consolidation Options**

This chapter of the study provides an overview of relevant information with respect to the various guidelines that will lay a foundation for and frame Butte County PSAP consolidation options. The chapter includes:

- An overview of common dispatch operation models for potential consideration.
- A discussion of the “Four Framing Elements” which should guide decision-making surrounding PSAP consolidation options.
- A discussion of the specific Butte County issues impacting potential consolidation opportunities.

This information provides a foundation for additional analysis in subsequent chapters.

### **1. THERE ARE VARIOUS PUBLIC SAFETY DISPATCH OPERATIONAL MODELS, AND A VARIETY OF CONSOLIDATION APPROACHES.**

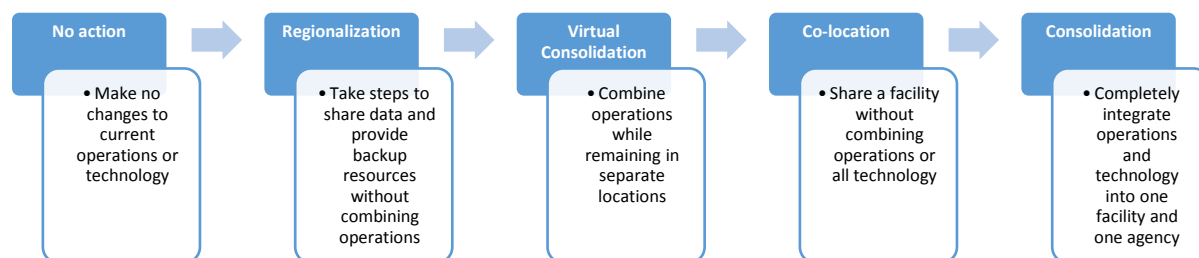
In order to understand the various options related to public safety dispatch services it is important to understand the various models that are in operation nationally. The following reflect primary dispatch approaches used throughout the United States. While this does not reflect all model types, these do include the vast majority of dispatch approaches currently in place in the nation.

- **Localized Dispatch Services:** Dispatch services are provided by a wide variety of dispatch organizations within a definitive political region (e.g. a county). These can include independent but joint (fire/EMS and law enforcement) governmental dispatch agencies in each major jurisdiction (e.g. cities, counties and districts); separate regionalized or localized dispatch agencies for fire or law enforcement exclusively; independently run dispatch operations that are contracted with either privatized or government-operated entities; or some combination of these alternatives. Butte County serve as examples of dispatch services that are localized and distributed throughout a region and performed by multiple agencies. Despite legislative and other national efforts to help minimize the number of dispatch agencies in various political jurisdictions, localized dispatch

services remain the primary dispatch service delivery mechanism throughout the country.

- **Full consolidation:** This is the most comprehensive consolidation model, and consolidates all 911 answering and emergency dispatch functions for law enforcement, fire and EMS in a defined and significant geographical area (e.g. County or special services district) into a single organization.
- **Partial consolidation:** This combines some emergency communications into a single organization, but not all. For instance, fire/EMS communications may be consolidated in a regional fashion, but law enforcement will remain independent (e.g. either at an independent city level or within their own regionalized operation such as a Sheriff dispatching all law enforcement in the County).
- **Co-location:** In this model, two or more organizations may share physical space and technology in one facility (e.g., CAD, answering positions, radio consoles, recorders) but retain their separate organizational identities.
- **Hybrid:** This model may have aspects of both full consolidation and co-location, and technology may or may not be shared, with organizational structures remaining separate.

Consolidation options can also be described as falling along a broad spectrum of possible opportunities, each carrying their own set of risks and rewards. This spectrum is generally categorized into five areas as shown in the graphic below.



All dispatch models noted above have operated successfully and as a consequence there is no single answer with respect to public safety dispatch operations. The unique factors of every service area—whether political, financial, technical, topographical, community expectation, or other myriad variables—largely influence which models will be most successful. Nevertheless, there are some national

trends in emergency communications and consolidated dispatch operations that are worth noting.

**(1) The Federal Government is taking an Increased Interest in Emergency Communications and Dispatch Consolidation.**

Signed into federal law on February 22, 2012, the First Responder Network Authority (FirstNet) was created. The law gives FirstNet the mission to build, operate and maintain the first high-speed, nationwide wireless broadband network dedicated to public safety communications. FirstNet will provide a single interoperable platform for emergency and daily public safety communications and this broadband network will fulfill a fundamental need of the public safety community as well as execute the last remaining recommendation of the 9/11 Commission<sup>2</sup>.

In October of 2010, the *Communications Security, Reliability and Interoperability Council (CSRIC)* of the Federal Communications Commission prepared a lengthy report entitled, “Public Safety Consolidation Effective Practices and Recommendations.” Within, sixteen independent findings were developed regarding suggested approaches and necessities for successful consolidation initiatives. It was noted in the report that the common drivers for consolidation revolved around:

*Public safety agencies choosing consolidation stated that their decisions were often driven by: service quality levels, operational concerns, technology obsolescence, and funding. The challenges practitioners reported included: transferring 9-1-1 calls among multiple communications centers, difficulty in coordinating multi-agency/multi-jurisdictional responses among different dispatch centers, concerns about sustainable funding, tracking emerging technologies (LMR, NG9-1-1, CAD, etc.), critical systems and/or facilities in need of refreshing/replacement at multiple sites, performance and service levels below expectations.*<sup>3</sup>

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<sup>2</sup> <http://www.firstnet.gov/about>

<sup>3</sup> CSRIC WORKING GROUP 1A Key Findings and Effective Practices for Public Safety Consolidation Final Report, 10/10.

In effect, emergency communications and dispatch consolidation has become of such importance, particularly in the last decade, that federal government agencies are taking an ever-increasing interest in the topic.

**(2) State Governments are Mandating Consolidated Operations.**

In an effort to allegedly reduce costs, streamline operations, and improve service delivery, various state governments are mandating consolidated dispatch operations to one degree or another. In the state of Indiana, Indiana law required all counties to consolidate their dispatch centers by Dec. 31, 2014. The 2008 law allows each county up to two public safety answering points. In Maine, the Legislature enacted Resolves 2009, Chapter 196 which directed the Public Utilities Commission to develop a plan by November 1, 2010 for achieving the 15 to 17 statewide Public Safety Answering Points configuration proposed in their Kimball Report—effectively consolidating nearly half of the existing PSAPs in the State. As early as 2001, The Oregon State Legislature passed HB397. A major focus of the legislation was to facilitate consolidation of Public Safety Answering Points in multi-PSAP counties. The bill required multi-PSAP counties to jointly submit a consolidation plan to Oregon Emergency Management (OEM) by September 1, 2002, and while efforts to ensure consolidation in each county has yet to come to complete fruition, this legislation continues to have an impact on future Oregon operations. Most recently, in 2015 the Illinois legislature passed laws that mandated communities of less than 25,000 population consolidate emergency communications by July 1, 2017. According to [www.911dispatch.com](http://www.911dispatch.com):

*Virtually all communications centers were originally formed locally. But over time, common sense and money have moved many local centers to combine, merge or consolidate, usually at a county level or at as part of a*

*special district. Over the past 15 years the trend has accelerated as funding and interoperability have become major issues. Several states now limit the number of PSAPs within a county, usually as a way of standardizing and funding the state's 911 equipment. But many other agencies are merging and consolidating to avoid the high costs of funding equipment upgrades required by wireless cellular, Voice-over-Internet Protocol/911 and other advanced—and required—technologies.<sup>4</sup>*

While some states are mandating consolidation, others are taking an approach to facilitate consolidation by providing funding for such endeavors. Still other state governments remain uncommitted to “forcing” a consolidation issue. Nevertheless, given on-going fiscal constraints for all governments nationally, it is difficult to argue that dispatch consolidation initiatives will fade in the near future.

**(3) The Association of Public Safety Communications Officials (APCO) and National Emergency Number Association (NENA) Have Formal Consolidation Training.**

The International APCO has significant standing among worldwide dispatch professionals. Currently, APCO now offers two distinct Members Assistance Advisory Program (MAAP) services to their constituents—a MAAP Wireless Facilitator Program and a MAAP Pre-Consolidation Assistance Program<sup>5</sup>. Furthermore, a well-regarded counterpart agency, the National Emergency Number Association (NENA), also offers specific classroom instruction in 9-1-1 Center Consolidation as part of its “Keeping Your PSAP Finally Tuned” suite of programs.<sup>6</sup> Based upon these particular initiatives, it is clear that APCO and NENA view dispatch consolidation as efforts worthy of formal training and supporting.

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<sup>4</sup> <http://www.911dispatch.com/hot-issues/>

<sup>5</sup> [http://www.apcointl.org/new/commcenter911/maap\\_psap\\_assistance\\_program.php](http://www.apcointl.org/new/commcenter911/maap_psap_assistance_program.php)

<sup>6</sup> <http://www.nena.org/education/keeping-your-psap-finely-tuned/consolidation>

In summary, the topic of emergency dispatch consolidation is one receiving increased scrutiny in many forums. Consequently, Butte County's effort to explore consolidation is a timely and worthwhile endeavor.

**2. DISPATCH CONSOLIDATION OPPORTUNITIES SHOULD BE SCRUTINIZED UNDER THE 'FOUR FRAMING ELEMENTS.'**

There can be little argument among any service provider that an ultimate goal is to deliver *the most productive level of service to the consumer*. This essentially translates into the most effective (i.e. quality) level of service that can be provided in the most cost-efficient manner. And while cost is quantifiable, effectiveness elements have important quantitative and qualitative characteristics. As a consequence, agreeing upon what is "most productive" is often arguable, as service providers' interpretation of quality can differ, let alone *what types of services should be offered*. There are some fundamental frameworks upon which nearly all public safety service delivery professionals can agree. As such, the Matrix Consulting Group has adopted these 'Four Framing Elements' to help guide decision-making with respect to dispatch operations and consolidation opportunities.

**(1) It is Crucial to Minimize Delays in Service Response for Effective Service Delivery to the Community.**

In the provision of emergency public safety service, seconds can make a difference. From those Priority 1 call types such as an officer down, to a baby-not-breathing to a structure fire, the reduction in response time (from E911 call receipt to unit(s) on-scene) should be a vital goal of all public safety service providers. According to the aforementioned state of Maine Public Utilities Commission:

*The Commission considers the single most important reason for consolidation is to improve emergency communication services resulting*

*in improved public safety. For example, reducing call transfers between PSAPs and dispatch-only facilities improves response times and reduces the potential for human or technology errors in handling emergency calls. Comments the Commission received from regions that already have combined PSAP call taking and dispatch centers noted that unified PSAP and dispatch is crucial to the overall efficiency and accuracy in emergency communications and response and that it can improve the quality of emergency communications not degrade it as some fear.<sup>7</sup>*

While there is various contradictory evidence with respect to overall law enforcement response time having a significant impact on crime suppression/apprehension, there is general consensus that reduced response time targets for law enforcement priority 1 and Code 3 (lights and siren) calls is highly desirable. Moreover, there is a wealth of research supporting the benefits of reduced response times in the fire and EMS service areas. The ultimate endpoint of various public safety research is to minimize response times to enhance service delivery, and to that end, dispatch service providers play a vital role in contributing to response time reductions.

**(2) Highly-Trained Professional Dispatchers Employing Consistent Protocols are the Ideal Solution to Effective Public Safety Service Delivery.**

Professionalizing public safety dispatch is becoming more commonplace throughout the nation given the benefits derived to the communities being served. The state of Pennsylvania Emergency Management Agency mandates through Chapter 120c dispatcher certification and training to be conducted by the Pennsylvania State Police. Texas, Kentucky, Florida, Utah and Georgia all have similar dispatcher certification requirements. Twenty-four states have moderate to strict legislative requirements related to Emergency Medical Dispatch operations. Finally, the National

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<sup>7</sup> Public Safety Answering Point Reconfiguration Plan, Maine PUC, 11/1/10, page 2.



Academies of Emergency Dispatch<sup>8</sup> and APCO strongly advocate formal training and certification in their respective organizations. Clearly, there is widespread recognition that well-trained dispatcher personnel are central to effective public safety service delivery. And indeed, the benefits of specially trained public safety dispatchers are being recognized as shown by the following abstract from 9-1-1 Magazine:

*Most agencies now have Communications Training Officers (CTOs), whereas just 20 years ago most trainees were assigned to a senior dispatcher or an unknowing dispatcher who was just working at the moment a trainee walked in the door. Within a day or two, it was time to solo. CTOs have been a great addition to our profession (and) they should also be somehow compensated for that additional responsibility and pressure, just as patrol Field Training Offices are compensated for this vital responsibility. In the early 1990s, the California fire service developed another specialty position that has since blossomed nationally. Based on the Incident Command System (ICS) "Radio Operator" position, it was modified into a local-agency based, rapid-deployment function called the Incident Dispatch Team (IDT). It was discovered that by using a specially trained dispatcher at a fire scene command post, it enhanced field communications, unified command, responder safety, and resource management. By handling a myriad of responsibilities, it freed the Incident Commander to concentrate on the handling of the event while their IDT or specialized dispatcher handled vital tasks and resource tracking. Shortly after the rise of fire department IDTs, a now-retired FBI agent, realized that using professional communicators at hostage stand-offs, SWAT call outs, and other law enforcement events was a great tactical benefit. This training also started in California. This idea has gone nation-wide.<sup>9</sup>*

In summary, strong evidence exists that the deployment of professional dispatcher positions in a public safety environment is an essential service delivery approach for the most effective dispatch operations. This would be demonstrated through training, consistent application of common policies and procedures, certifications, and as-needed specializations to serve public.

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<sup>8</sup> [http://www.emergencydispatch.org/cert\\_home.php?a=cert](http://www.emergencydispatch.org/cert_home.php?a=cert)

<sup>9</sup> May 2004 article, 9-1-1 Magazine

**(3) In an Era of Government Fiscal Constraint, Taxpayers Deserve Highly Effective Dispatch Services at the Most Reasonable Cost.**

In large part as a consequence of the “Great Recession,” provision of government services at the most reasonable cost is particularly important. Nearly all states and local governments have faced significant budget reductions, many initiated personnel reductions and other dramatic cost saving measures, and as a result there are very few, if any, public sector service delivery functions that are safe from potential service delivery impacts. These circumstances emphasize the need to provide services at the most efficient levels.

The various dispatch operation in Butte County, regardless of agency of origin, are ultimately paid by the County’s taxpayers. Monies saved from efficient dispatch operations could be expended in other public safety or government service areas. County-wide dispatch services should therefore be collectively delivered at the most reasonable overall costs that will ensure cost-effective service delivery. As noted previously, it is not surprising that one of the catalysts for dispatch consolidation throughout the nation is cost containment.

**(4) Operational Changes from any Consolidation or Alternative Dispatch Delivery Initiative should have a Net Operational Benefit to Public Safety Services Overall.**

Perhaps the most difficult and fourth cornerstone of the ‘Four Framing Elements’ is evaluating the impact of operational alternatives on public safety operations in general, not just those associated with dispatch-based operations. There are particular reasons the most common dispatch model is localized dispatch services—the primary fact that such services provide important real or perceived benefit to the local community which it serves. Throughout the nation dispatch personnel provide widely

different service types: from advanced and tactically based dispatch services in an incident command situation to staffing a front desk and performing face-to-face customer service in a rural setting as one of several job responsibilities allocated to this position. The analysis of this “net change” is both quantitative and qualitative, but is no less important than other considerations noted previously. As such, it must be weighed equally, recognizing however that there are three framing elements that come into play when evaluating alternative dispatch service delivery options.

**3. VARIOUS AGENCY ISSUES, SERVICE REQUIREMENTS, AND OPERATIONAL PERCEPTIONS IMPACT THE PRACTICALITY OF MANY DISPATCH CONSOLIDATION OPTIONS IN BUTTE COUNTY.**

Our analysis, based on variety of information collected over the course of the Butte County project, identified a number of issues that would severely restrict the practicality of various dispatch consolidation options. In sum, while various consolidation options might be feasible, in the context of the ‘Four Framing Elements’ discussed above they are not practical solutions for Butte County. Key issues are identified in the following sub-sections that serve to limit the consolidation opportunities explored in this report.

**(1) Cal-State Chico Withdrew Participation in the Engagement at the Project’s Outset.**

After initial consultation with Cal-State Chico, the university’s police chief determined that participation in dispatch consolidation efforts with other Butte County PSAPs was not viable given a variety of factors. As such, they withdrew from consolidation consideration early in the project.

**(2) CalFire Has Legislated Restrictions That Prohibit the Agency from Participating in Most Dispatch Consolidation Options.**

CalFire cannot participate in regionalized 911 dispatch efforts unless they are the lead agency; this is due to various legislative requirements and founded on their classification as an Emergency Command Center (ECC) that has certain operational requirements beyond many municipal and special district dispatch agencies. From various fire chiefs' perspective, the unique operational requirements of CalFire and how they dispatch and manage fire suppression is based on state-wide policy and procedural directives that are unalterable. Consequently, local fire agencies do not have the complete flexibility to manage fire suppression in an on-scene incident command fashion that might best meets local needs, as the CalFire ECC is effectively in control as dispatch has 24/7 Captains with command authority. Furthermore, CalFire cannot undertake law enforcement dispatch services. Consequently, the only option for CalFire in a consolidated initiative is to dispatch additional fire agencies beyond Butte County and the smaller communities of Paradise, Gridley and Biggs. This would further bifurcate law enforcement and fire/EMD dispatch service delivery, and given CalFire is a secondary PSAP, would require additional call-transfers from the primary PSAPs. This would further extend response time to the end-user. Extending response times is inconsistent with the first of the 'Four Framing Elements.'

CalFire does not have a state-wide formalized cost-sharing model for providing fire/EMD dispatch; agreements are individually negotiated with service recipients and based on a variety of cost-sharing models. As a result, there is no reliable way to

determine what costs would be incurred if CalFire were to provide fire/EMD dispatch to Butte County and all municipalities within its boundaries.

As a result of these issues, CalFire's participation in an alternative Butte County dispatch consolidation model has been eliminated from further consideration given other models represent more practical solutions.

**(3) The Butte County Sheriff's Office Would Only Reluctantly Participate in Dispatch Consolidation as a Service Provider to Other Law Enforcement Agencies.**

The Sheriff's Office believes that direct control over County law enforcement dispatch services is a critical component of Butte County's law enforcement service delivery spectrum. At the outset, the BSCO believes that dispatch is the first, and a key, contact with the County constituents and because this first contact reflects directly upon the agency and its perceived service delivery, it is critical for the Sheriff to have oversight accountability. Additionally, the BCSO provides dispatch services to some recipients that are atypical of other County PSAPs to include civil court, jail and the coroner's office. Finally, the BCSO is examining a full-suite software solution to help manage various BCSO operational functions to include fully integrated CAD, Records Management and Jail Management software. As such, it is not exploring CAD vendors used by their counterpart PSAP agencies.

In sum, the Sheriff believes that most consolidated dispatch service delivery approaches involving the BSCO would be inconsistent with the fourth 'Framing Element' that states, *Operational Changes from any Consolidation or Alternative Dispatch Delivery Initiative should have a Net Operational Benefit to Public Safety Services Overall*. Nevertheless, the BSCO would consider providing contract dispatch services

to other county law enforcement agencies. This approach, however, would result in the same kind of response time issues that would occur if CalFire did all fire dispatch as described previously. If BCSO contracted to all law enforcement agencies, additional fire/EMD calls would be transferred if Chico and Oroville were served by the Sheriff, thereby increasing response times overall. As noted, extending response times is inconsistent with the first of the 'Four Framing Elements.' This issue would not be exacerbated, however, if the Sheriff were only to provide contract services to Gridley and Paradise as they presently transfer fire calls.

Additionally, given BCSO's dispatch operational size relative to their larger Chico counterpart, if contract services were the best approach it would be better conducted by the largest agency in the region that has the current capability to offer full dispatch services (law/animal control/fire/medical).

In conclusion, the BCSO is a strong proponent of functional consolidation in which data is shared between all PSAPs through system integration technologies.

**(4) The City of Chico Has Undertaken Recent Efforts to Upgrade and Replace Their Existing CAD System, Restricting Foreseeable Future Consolidation Flexibility.**

Previous to, and during the course of this project, the City of Chico explored CAD upgrade software options that would potentially impact the feasibility of various PSAP consolidation initiatives. The City Council approved a CAD upgrade to the Sungard software solution. While this software's specifications clearly met the needs of Chico's police, fire, and animal control operations, it was not a software solution that other PSAPs in the County were using or, in the case of BCSO, pursuing. Because of the capital and implementation costs of this software solution, it effectively restricts Chico

from participating in any dispatch consolidation initiative that does not involve this software. Consequently, this leaves Chico in the only role of contracted dispatch service provider to other agencies beyond the functional consolidation initiatives referenced previously. Unlike BCSO, however, Chico is better positioned to provide these services as they are the largest dispatch agency in the County in both personnel and facility adequacy and are currently capable of providing most dispatch service types – law, fire, and animal control.

**4. BASED ON THE UNIQUE FACTORS IMPACTING BUTTE COUNTY, TWO CONSOLIDATION OPTIONS WILL BE EXPLORED IN ADDITIONAL DETAIL.**

Based on the above factors, the Matrix Consulting Group has determined that within the guidelines of the ‘Four Framing Elements’ there are two (2) full-consolidation<sup>10</sup> options that have practicality in Butte County beyond virtual/functional consolidation efforts to be discussed. The following bullets summarize the various findings to reach this conclusion.

- CalFire has various operational and legislative restrictions impacting dispatch operations and has no standardized cost-sharing model for dispatch services complicating consolidation efforts. CalFire is excluded from further full-consolidation options.
- The BCSO has identified service delivery and oversight expectations that do not facilitate consolidation efforts other than through providing law enforcement dispatch services on a contracted basis. The potential benefits of this contracting arrangement do not mitigate the disadvantages as guided by the ‘Four Framing Elements’ and as such BCSO is excluded from further consolidation options.
- Chico has just purchased a six-figure CAD software solution that restricts their flexibility, due to sunk costs, in various consolidation options. However, Chico could feasibly provide consolidated dispatch solutions via contract to other agencies excluding BCSO and CalFire. This possibility is one of the two Butte County dispatch consolidation options further explored.

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<sup>10</sup> Unless otherwise noted, consolidation references hereafter refer to “full-consolidation,” that is the provision of dispatch services from one entity located in one facility.

- The municipalities of Oroville, Paradise and Gridley/Biggs<sup>11</sup> are smaller municipalities providing dispatch services as well as a variety of ancillary public safety support services performed by dispatch staff. Nevertheless, these three agencies use RIMS CAD software and from a technological standpoint, are virtually consolidated given data can be shared among the three agencies. Given the technological commonalities and working relationship among these three agencies, consolidation opportunities will be explored, leaving Chico, BCSO and CalFire independent under current operational circumstances.

In conclusion, this chapter provides a variety of guidelines impacting dispatch consolidation initiatives, ranging from the on-going national efforts supporting such efforts to the unique issues that impact consolidation opportunities in each region such as Butte County. Based on these data, two consolidation options will be explored in further detail, while also providing dispatch operational information that will prove valuable to each agency regardless of consolidation outcomes.

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<sup>11</sup> Hereafter referred to as Gridley which provides contract services to Biggs.



## **5 PSAP Operational Analysis**

This chapter of the study provides an analysis of the independent operations of the various PSAPs. This data also will influence the two consolidated initiatives to be examined in further detail in the next chapter.

### **1. EFFECTIVE DISPATCH OPERATIONS ARE PREDICATED ON PROPER STAFFING LEVELS. STAFFING MODELS USE NUMEROUS VARIABLES TO DRIVE OVERALL DISPATCHER STAFFING REQUIREMENTS.**

Developing an appropriate staffing model for a dispatch operation is not only critical to ensure effective service to caller, but for those public safety agencies being serviced. To operate in the most efficient and effective manner possible, it is important to right-size the dispatch operation's staffing levels. Our project team has conducted an analysis of the dispatcher staffing needs of the six participating PSAPs through a model-based approach, using data obtained from the project participants. Our team has reviewed and used a variety of dispatcher staffing models over the last several years. Indeed, as new information becomes available, these models are further modified to enhance their ability to assess the necessary staffing in a dispatch environment.

Development of a staffing model begins with understanding and, as data are available, calculating several variables. The sub-section below deals with staff availability—a critical factor in all staffing models.

#### **(1) Net Dispatcher Availability Information.**

While one Full-time Equivalent (FTE) staff position is scheduled to work 2,080 hours per year in most professions, this is not always the case, particularly in public safety professions who have “exotic” schedules to meet service level demands. These

often include 12-hour shift schedules where staff, such as the dispatchers at Paradise, BCSO, Gridley and CalFire are scheduled to work 2,190 hours per year.

A critical workload element to determine staffing requirements is the amount of annual time available for dispatch personnel to perform their work. This is defined as net availability and it is the number of hours that a dispatcher is available to perform their key dispatcher roles and responsibilities after the impact of leave/unavailable time has been subtracted from their gross annual scheduled hours of work. Leave includes sick, vacation, compensatory time off, etc. while unavailable time is time lost to breaks and meals, training, and other similar workday interruptions.

With respect to net availability in general, a desirable target is 70-75% or greater net availability for a typical 2,080 hour work year and 75% to 80% for the 2,190 hour work year that is characteristic of most 12-hour shift operations. While these are desirable targets, they can at times be difficult to achieve in practice given numerous variables. Leave and other unavailability factors are strongly influenced by a variety of things including scheduled and unscheduled leave benefits that have been negotiated, the actual use of such benefits, the robustness of an annual training program, the seniority of a workforce, etc.

Three of the six participating agencies were able to provide leave and unavailability data; all of these agencies were on the 12-hour shift program. Based upon data provided, the following net availability was calculated:

- Paradise dispatch – 87% annual net availability.
- BCSO dispatch – 80% annual net availability.
- Gridley dispatch – 82% annual net availability.

- Chico dispatch – 76% annual net availability.

In sum, data suggest PSAP agencies in Butte County manage operations such that net availability is consistent with best-practice operations. Assuming this is reflective of other Butte County PSAP agencies that were unable to report leave, these higher net availability factors are used as a baseline, and for those agencies not reporting leave information 78% net availability is used for 12-hour shifts and 73% net availability is used for 8, 10, or 12.5 hour shifts in the forthcoming modeling exercise.

**(2) Turnover at Reporting PSAPs is Different and Turnover Characteristics can Impact Authorized Staffing Requirements.**

Three years of turnover data was examined for PSAPs that responded to this data request. For comparative purposes, dispatcher turnover nationally averages 17% to 19%<sup>12</sup>.

- Paradise dispatch – 39% average annual turnover.
- BCSO dispatch – 17% average annual turnover.
- Chico dispatch – 13% average annual turnover.

In sum, data suggest PSAP agencies in Butte County have turnover characteristics that are generally consistent with national averages. While Paradise Dispatch appears as an outlier, in two of the three reporting years the turnover was 17%; the average reported was driven by one exceptionally difficult year. Assuming this is reflective of other Butte County PSAP agencies that were unable to report turnover, national percentages can be used in staffing calculations to ensure coverage of positions that could be vacant as a result of retirements, resignations, an inability to pass probation, etc.

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<sup>12</sup> <http://www.iaedjournal.org/content/turnover-factor>

## **2. ANALYSIS OF DISPATCHER STAFFING NEEDS BY FOR BUTTE COUNTY PSAP AGENCIES.**

Our project team has conducted an analysis of the dispatcher staffing needs of the six participating PSAPs through a model-based approach, using data obtained from the project participants. The methodology and process of these calculations is detailed in the following sections.

### **(1) Overview of the APCO Approach.**

In order to accurately model the workload and staff resources of dispatch operations, a number of important factors must be considered. It is not sufficient to base the staffing needs of an operation center based on workload alone, as many key variables, such as average leave time and turnover rate as discussed above, are vastly different among agencies throughout the nation. In the last few years the Association of Public Communication Officials (APCO) has published a staffing model as part of their Project RETAINS efforts, developed by the University of Denver Research Institute. In effect, the APCO project RETAINS model requires several discreet data elements based on actual workloads to be effective. These include:

- **Net (actual) Annual Staffing Availability** as shown earlier in this chapter.
- **Average Telephone Busy Time** (call duration in seconds), from phone or other records. This should ideally distinguish between law and fire E-9-1-1 calls and administrative calls for service.
- **Average Processing Time:** A combination of average radio time and average task completion time per incident. Both numbers are calculated from agency CAD data covering a period of one year. If these times are not calculable (due to either issues with the data, unknown variables, or other reasons) a normative value is used based on the experience of the project team in working with other similarly sized dispatch agencies.
- **Agent Occupancy Rate:** Even after accounting for the net availability of dispatchers, the resulting number still does not represent an accurate picture of

their ability to complete workload. It would be impossible for a dispatcher to spend 100% of their available time going from call to call without break – even if it was logistically feasible for this to be true, the resulting effect on burnout would be significant. Given these reasons, the agent occupancy rate, which is in effect a “total utilization rate”, is created as a target for the ideal percentage of time a dispatcher is actually completing work. Today, utilization targets are often set by agencies from around 50% to 65%.

In brief, the APCO project RETAINS staffing model is a generally good methodology with a few notable exceptions, but it is data intensive to the extent that many agencies do not possess the level of detail required to properly complete the model. The MCG, using the APCO model as a baseline, has made some slight revisions using major work activities captured as well as some assumptions regarding other types of work. These are discussed in the following sub-sections.

## **(2) Results of the APCO Retains Dispatcher Staffing Analysis.**

Using the calculation process outlined in the sections above, dispatcher staffing needs based on core dispatch workload can be modeled. The subsequent table shows the various calculations involved to derive at a dispatcher staffing level necessary based exclusively on the magnitude of core dispatch workload. The model does not accommodate a variety of other factors such as ancillary work performed by dispatch staff, workload fluctuations throughout the day/hour, and other variables. These are discussed later in the report. The following bullets, discuss the various assumptions and sources of data to arrive at the table's information.

In order to further clarify how the calculations have yielded these results, the outline below explains how each of the variables used was determined:

- **Average Processing Time for CAD Incidents:** Reflects available data calculations, as well as a conservative estimate of the time required for dispatcher workload related to a CAD incident to be processed.

APCO, NENA and others have not provided any benchmarks with respect to this kind of processing time for CAD incident workload, suggesting an estimate be developed for such work. Consequently, developing a reasonable time estimate for Average Task Completion Time for every CAD incident is the only current approach beyond an industrial engineering exercise, which is beyond the scope of this study. Given our experience in a broad array of dispatch agencies, we believe that given the current operational environments in Butte County, an average of **2.5 minutes per incident** is a very reasonable estimate to capture incident “wrap-up” and related activities that include such things as keyboard entry, license and warrant runs, etc. Obviously some incidents will take longer and others shorter dependent upon the type of incident.

Secondly, the APCO-based model can use the actual number of radio transmission transaction time as a primary workload driver to determine average radio time. Dispatchers are responsible for relaying information effectively via the radio and are usually multi-tasking (keyboard entry or console monitoring) while such “air time” is transacting. It is a primary responsibility of dispatch staff. The total time associated with radio transactions is calculated to determine an average amount of time spent in this key task. The comprehensiveness of radio transaction data was different for every agency as shown in the Profile Chapter. Based on our examination of the data, we developed an average air time for the agencies of .39 minutes per radio transaction<sup>13</sup>. This was based on different agencies’ information. Furthermore, since the APCO model is based on incidents, we extrapolated how many average radio transactions occur per an incident; this was calculated at 7.4. The overall result is 2.89 radio minutes per CAD incident.

The sum of these two totals is a **5.39 minutes** based on calculations and reasonable estimates.

- **Average Processing Time for Telephone Calls:** Some telephone systems easily capture time spent on telephone lines, others do not. Data provided to the project team had no time transactions, only number of in-coming and out-going telephone lines. There are various estimates for telephone time, however we believe the most accurate is from an NFPA study citing 92 seconds is the most relevant average for emergency response. This average was used to estimate time on all telephone calls—out-going and in-coming—and the number of non-abandoned telephone transactions in each agency was extrapolated to each CAD incident.<sup>14</sup> Because telephone traffic is different for each agency, the estimated telephone transaction time for each CAD incident is different.

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<sup>13</sup> 0.32 minutes X 1.2 based on radio data provided.

<sup>14</sup> BCSO, for example, had 173,552 (A) non-abandoned calls and 57,583 (B) CAD incidents. Using 92 second per call and extrapolating to incidents, BCSO spent an estimated 4.62 minutes for telephone work on each incident (A/B x 92).

- **Time Investment per CAD Incident:** The time investment per CAD incident is related to the sum of the above two bullets for each agency. It is reflected as total minutes spent and ranges from 8.02 to 12.86 dependent upon the operating PSAP.
- **Total CAD Incidents:** Reflects data provided from each PSAP for 2014 or 2015. These CAD incident records were validated by PSAP staff in an interim deliverable.
- **Annual Workload Hours:** Workload hours are the result of the CAD Incident Time Investment and Total CAD incidents data. It is a multiplication of these two variables resulting in an estimated annual workload for dispatchers related to CAD incidents.
- **Net Annual Available Work Hours:** Reflects the average availability of each agency's dispatchers based upon the information provided earlier in this report.
- **Agent Occupancy Rate:** While utilization rates of 65% are occasionally used today, a rate of 50% was chosen as a conservative estimate; this AOR is generally accepted by APCO.
- **Turnover Rate – 3 Year Average:** Reflects turnover information described previously in this report.

Based on the information from all these variables, the APCO staffing model results are shown for each agency below. As a reminder, these staffing estimates are based exclusively on the magnitude of core dispatch workload and do not include ancillary work performed by these staff (e.g. front desk assistance).

**APCO Staffing Calculations Based on CAD Incident-related Workload**

<b>Category</b>	<b>Paradise</b>	<b>BCSO</b>	<b>Oroville</b>	<b>Gridley</b>	<b>Chico</b>	<b>Cal Fire</b>
Average Task Completion Time Per CAD Incident (in minutes)	2.5	2.5	2.5	2.5	2.5	2.5
Average Radio Time Per CAD Incident (in minutes)	2.89	2.89	2.89	2.89	2.89	2.89
Average Processing Time (APT) for CAD Incident (in minutes)	<b>5.39</b>	<b>5.39</b>	<b>5.39</b>	<b>5.39</b>	<b>5.39</b>	<b>5.39</b>
Average Telephone Time Per Telephone Call (in minutes)	1.53	1.53	1.53	1.53	1.53	1.53
Average Telephone Time Extrapolated for a CAD Incident (min)	5.30	4.62	2.88	2.63	4.40	6.97
Time Investment Per CAD Incident (APT + Telephone Time)	10.69	10.01	8.27	8.02	9.79	12.36
Total CAD Incidents (2015 period)	20,342	57,583	47,016	16,085	78,399	18,726
Workload Hours Related to CAD Incidents (Hours)	<b>3,625</b>	<b>9,608</b>	<b>6,480</b>	<b>2,149</b>	<b>12,793</b>	<b>3,857</b>
Net Annual Available Work Hours	1,896.5	1,745	1,518.5	1,789	1,518.5	1,708
Agent Occupancy Rate (AOR)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
True Annual Availability After AOR (Hours)	<b>948</b>	<b>873</b>	<b>759</b>	<b>895</b>	<b>759</b>	<b>854</b>
Turnover Rate – 3-YR Average	39%	17%	17%	17%	13%	17%
FTE Required to Accommodate Turnover @ 50% Occupancy Rate	<b>5.3</b>	<b>12.8</b>	<b>10.0</b>	<b>2.8</b>	<b>19.0</b>	<b>5.3</b>
Full Time Equivalent Positions (FTE) Required Without Turnover @ 50% AOR	<b>3.8</b>	<b>11.0</b>	<b>8.5</b>	<b>2.4</b>	<b>16.9</b>	<b>4.5</b>
Existing Authorized Staffing Levels	<b>6 F/T 3 P/T</b>	<b>10 F/T 4 P/T</b>	<b>9 F/T</b>	<b>4 F/T 3 P/T</b>	<b>18 F/T 1 P/T</b>	<b>7 F/T</b>



It is important to consider that, as in any staffing model, changing specific variables can have impacts on the resulting output, which in this case are the numbers of full-time equivalent dispatcher positions needed by each agency. In summary, the data provided by the various participating PSAPs was sometimes inconsistent or unavailable, and as such certain assumptions needed to be made. Assumptions were based on the best data available, to include other Butte County PSAP agency information, standards, and our experience with many other PSAP agencies. Where assumptions were made, they should be considered conservative; that is, we would err on the side of more staffing as opposed to less staffing.

### **(3) Fixed-Post Dispatcher Staffing Plan.**

In agencies where CAD incident based data suggest less than 24-hour/7-day coverage is necessary based on workload characteristics, it is important to calculate fixed post staffing requirements. In order to determine fixed-post coverage positions<sup>15</sup> necessary, establishing the number of consoles (work stations) that must be staffed must be determined. This is often dictated by an operational, policy, or contract requirement, and when used is typically developed by the dispatch agency in cooperation with its clients.

In this staffing exercise, only three agencies require the use of a fixed-post model. These include the Paradise, Gridley and CalFire PSAPs. CAD incident-based workload suggests this is necessary, and as such one fixed-post should be designed for each locale. Briefly, for every fixed-post, 8,736 work hours need to be covered in a year. Using the availability factors and other transactional information from the previous

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<sup>15</sup> One fixed-post coverage positions requires 24x7x52 hours of coverage or 8,736 hours per annum per the APCO model approach.

calculations, the APCO model can calculate the number of FTEs that are required to constantly fill the fixed-post position(s) after leave, turnover, etc. have been accounted for.

The table below projects the number of FTEs needed for these three agencies to achieve a basic fixed-post staffing plan at one fixed-post for each agency.

**Calculation of Fixed-Post Staffing Levels for “Smaller” Dispatch Agencies**

Category	Paradise	Gridley	CalFire
Avg. # of Consoles Needed in Fixed-Post Plan	1.0	1.0	1.0
# of Hours that Need to be Covered Per Day	24	24	24
# of Days that Need to be Covered Per Week	7	7	7
# of Weeks that Need to be Covered Per Year	52	52	52
Total Annual Hours Needing Coverage	8,736	8,736	8,736
Net Annual Available Work Hours	1,896.5	1,789	1,708
FTE Required Without Turnover Consideration	4.6	4.9	5.1
Fixed-Post Personnel Needed to Accommodate FTE Required	5 F/T	5 F/T	6 F/T

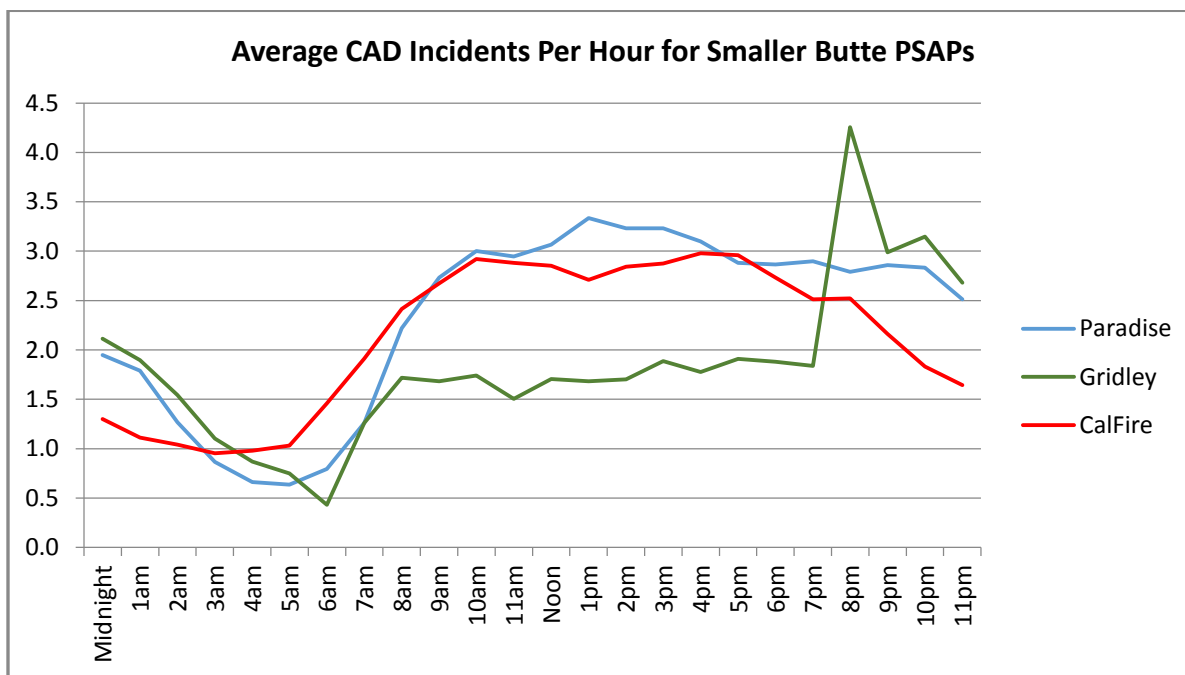
The noted staffing levels are for dispatcher staff requirements based on fixed-post calculations and are irrespective of any workload requirements. These are the personnel needed to “fill the seats” at each agency.

**(4) Addressing Potential Staffing Issues Resulting from Modeling Small Dispatch Agencies.**

Small dispatch agencies face a particular dilemma when various dispatch models show core dispatch workload is insufficient to support 24/7 coverage and thus should staff based on a fixed-post model. When data shows only one fixed-post position is necessary, such as in the above three agencies, then certain problems could potentially arise given the vagaries of workload by time of day. As such, looking and CAD incident

workload by hour is helpful to determine if one person is adequate to provide dispatch coverage.

The following chart shows what dispatch-related workload variations can be expected for Paradise, Gridley and CalFire by time of day.



As the chart above shows, generally speaking CAD incident workload is below three (3) incidents per hour. While there are a few higher peak periods, these are not particularly significant. Given the average time required to process each CAD incident as described previously, one dispatcher at each of the three agencies can handle the respective core dispatch workload and typically retain 50% or more available time (i.e. an AOR higher than 50%).

**(5) Elements and Assumptions Not Directly Apparent in APCO Dispatch Workload Modeling.**

In APCO-based dispatcher modeling exercises, particularly those related to exploring optional service delivery approaches, certain assumptions and clarifications need to be made.

In those instances where dispatchers perform duties above and beyond core dispatch workloads as described above, how is this work typically accounted for? For example, in a variety of smaller dispatch agencies throughout the country dispatchers will enter stolen property or stolen vehicle information into databases in lieu of a records unit accomplishing these tasks. This is the situation for some Butte County PSAPs, particularly Paradise and Gridley. A revisit of the Profile Chapter shows the numerous ancillary duties that are performed by these dispatchers. It is summarized below:

**Gridley Dispatch:** A substantial portion of time is dedicated to Records-related support functions to include but not be limited to: 24/7 front counter service; mail; vehicle impounds; sex offender registration; gang registration; warrants; CCWS permits; 311 phone; jail cameras; Chief correspondence; 911 community education and events; CLETS/NLETS administration and other administrative support.

**Paradise Dispatch:** Reasonable percentage of time is dedicated to Records-related support functions to include but not be limited to: Scans/reviews/routes cases; scans/processes citations; serialized pawn slip entry; restraining order processing; FI cards entry; public works page-outs; CLETS/NLETS administration and front desk support from 3 pm – 5pm and from 8 am – 9am.

Reiterating, this workload is not captured in the staff APCO modeling, and reflects one of the limitations of APCO's model. Nevertheless, in the large majority of instances these kinds of services are performed during the time between dispatch activities or during the agent occupancy "downtime" of 50%. It is for this reason the project team normally selects the more conservative 50% agent occupancy rate as opposed to the more aggressive 65% rate. The 50% AOR allows some time for these kinds of functions to take place, as opposed to completely idle time on the part of

dispatch staff. That said, it is worth noting that each small dispatch agency will have unique circumstances that may require additional accommodation, as this kind of “ancillary” workload may actually represent the bulk of work efforts performed by dispatcher staff in these small dispatch agencies.

**3. BUTTE COUNTY PSAPs ARE ADEQUATELY STAFFED WITH PERSONNEL AND ONLY HAVE MARGINAL OPPORTUNITY FOR STAFFING CHANGES.**

The following table summarizes the information from the analysis section discussed above.

**Butte County Dispatcher Staffing Information**

<b>Agency</b>	<b>CAD Incident-based FTEs Required</b>	<b>Fixed-Post FTEs Required</b>	<b>Current Authorized Staffing</b>
Paradise	3.8	5.0	6 F/T; 3 P/T
BCSO	11.0	n/a	10 F/T; 4 P/T
Oroville	8.5	n/a	9 F/T
Gridley	2.4	5.0	4 F/T; 3 P/T
Chico	16.9	n/a	18 F/T; 1 P/T
CalFire	4.5	6.0	7 F/T

As information in the table demonstrates, each PSAP within Butte County has done an admirable job of devising dispatcher staffing plans, through the use of full and part-time staff, to perform the necessary and often unique duties and responsibilities associated with each agency. While one could argue that Paradise and CalFire are marginally over-staffed based on the various modeling exercises, and Gridley is slightly understaffed, the margin-of-error that is inherent in any modeling suggests that the individual PSAPs have developed their operations with appropriate authorized dispatcher staffing levels. Furthermore, the manner in which these PSAPs oversee and supervise staff is also consistent with sound organizational structure, and as such, no changes are warranted. The key issue, however, is ensuring that authorized staffing levels are maintained, as each PSAP can suffer (particular the smaller agencies) if

these staffing levels are not maintained. As such, consideration for “over-hires” to accommodate dispatcher turnover is a policy decision worthy of discussion. It is fully recognized, however, that “over-hires” and the attendant costs can be particularly difficult to accomplish.

#### **4. DISPATCH ORGANIZATION BEST MANAGEMENT PRACTICES.**

As part of the operational review component, the Matrix Consulting Group was also asked to comment on various best management practices associated with dispatch operations. While this study’s scope is not intended to provide a comprehensive evaluation of each of the independent PSAPs, we can provide observations based upon the information collected for this consolidation feasibility study.

In order to conduct business effectively, all organizations should implement Best Management Practices as practical. These go beyond what is considered common practice. It should be noted, however, that agencies may not be able (or are unwilling) to completely implement a best practice for a variety of reasons that include:

- Insufficient resources, whether personnel or fiscal, to adopt a best practice.
- Inadequate available time to emphasize and proactively implement new practices as a consequence of focus on managing critical day-to-day issues (core business).
- Insufficient support from political, executive, or managerial personnel to adopt a best practice.
- Inadequate buy-in from line staff to implement a best practice.
- Disagreement that the best practice, although successfully implemented in other agencies, would not be successful in the agency under BMP review (for various cultural, organizational, or local/regional issues), and therefore is not a “best practice” from said agency’s perspective.

Although there are relevant reasons, as noted above, to not implement an identified best practice, the ultimate intent should be to strive for implementing as many best practices as feasible within the capabilities of the organization.

Located within the Appendix of the report is a check-list of dispatch-related best management practices surrounding a variety of functional areas in the dispatch profession. As noted, our scope of services did not entail the comprehensive evaluation of each service provided by each PSAP and thus some information may be lacking against a particular best practice approach. Nevertheless, the check-list is provided for each of the six PSAPs under study as a method to gauge various “success factors.” Our observations are made based on the best available information at the time of the study, and these should be reviewed in that context. Ultimately, each PSAP must determine whether the best practice is worthwhile for future implementation regardless of the current state of affairs.

In summary, the implementation of Best Management Practices can help distinguish the average agency from those widely recognized as a best-in-class operation.

***Recommendations:***

***Under a non-consolidated operation, maintain existing authorized staffing levels at the Paradise PSAP.***

***Under a non-consolidated operation, maintain existing authorized staffing levels at the Butte County Sheriff’s Office PSAP.***

***Under a non-consolidated operation, maintain existing authorized staffing levels at the Oroville PSAP.***

***Under a non-consolidated operation, adding one (1) full-time authorized dispatcher position to the Gridley PSAP would result in five (5) full-time staff, would provide the Department operational flexibility, and would normally provide***

***24/7 coverage capability; however, existing authorized full and part-time dispatchers with overtime expenditures can be managed to cover shifts.***

***Under a non-consolidated operation, maintain existing authorized staffing levels at the Chico PSAP.***

***Under a non-consolidated operation, eliminating one (1) full-time authorized dispatcher position from the CalFire PSAP would result in six (6) full-time staff who could provide 24/7 coverage capability. However, existing authorized full-time dispatcher positions cannot be considered excessive and thus this recommendation should only be considered under fiscally constrained situations.***

***APCO best-practice suggests accommodating staff turnover through over-hire initiatives. Each agency should consider this policy decision and if approved, staff their PSAPs according to over-hire information provided in this report.***

***Butte County dispatch agencies should further explore the provided PSAP best practices matrix and undertake various best management practice initiatives to become best-in-class dispatch service providers.***



## **6 Consolidation Feasibility Analysis**

This chapter of the study provides an analysis of consolidation opportunities, largely framed by Chapter Four's consolidation guidelines.

### **1. WHILE ONLY TWO BUTTE COUNTY CONSOLIDATION OPTIONS ARE REALISTIC IN THE NEARER TERM, IN THE LONG-TERM DISPATCH REGIONALIZATION SHOULD BE REVISITED.**

As noted in Chapter Four's guidelines, there are various restrictions and viewpoints that limit the number of practical consolidation opportunities worthy of further exploration. Reiterating, these include Chico providing consolidated dispatch solutions via contract to other agencies excluding BCSO and CalFire, or potentially expanding the virtual/functional consolidation of Oroville, Gridley and Paradise given the technological commonalities and working relationship among these three agencies, leaving Chico, BCSO and CalFire independent under current operational circumstances.

These opportunities will be discussed in further detail later in this chapter. However, for context, the project team believes it important to note the potential staffing impact of a regionalized dispatch center versus the existing dispatch operations. While the operational analysis provided previously suggests each of the PSAPs staffing levels are generally appropriate, the benefits of economies-of-scale can be relevant. Furthermore, a regionalized dispatch center would operate differently than the current PSAPs, with 24/7 dedicated call-taker staff and dispatch-only work stations. This results in a different staff modeling exercise as further described below.

**(1) The Erlang-C Call-Taker Model.**

Dedicated call taker staffing needs (as opposed to dispatcher/call-taker roles) are not determined using the APCO Retains model, and are instead calculated in a different process. This model is based on the work of Danish engineer Agner Erlang. Unlike the APCO model which estimates staffing based upon different kinds of work outputs, the Erlang-C model uses workload variables but the primary driver is related to developing staffing recommendations based on desired levels of performance or “response time.” In effect, the Erlang Model is a predicted performance model that calculates the probability of a certain average wait time that a caller would experience.

One of the primary criticisms of the Erlang model is that it assumes an acceptable “on-hold” time for the caller. While initially this may seem to make the Erlang model impractical for use in PSAP environment, using national or local policy-driven standards for call answering times eliminates the shortcoming of an assumed hold time. The Erlang model uses calculations to find the amount of time it takes to answer a call based on a certain level of staffing; these times can then be compared to standards to assure performance minimums are achieved. Although the Erlang model has been traditionally used to estimate staffing needs and performance predictions for non-emergency call center operations, the input values can be manipulated such that the model is well adaptable to emergency dispatch operations.

As it relates to standards, according to the National Emergency Number Association (NENA), PSAPs should meet or exceed the minimum standard of 90% of E911 calls answered within ten (10) seconds and 95% of E9-1-1 calls answered within twenty (20) seconds. Local and state standards may be different but these standards

should be considered reasonable operating protocols. In 2012 APCO published a paper also supporting the Erlang approach to call-taker staffing estimates.<sup>16</sup> The Erlang model uses sophisticated formulae based on probability theory and Poisson distribution<sup>17</sup> which will not be explored in this report. Suffice that the model is regarded as a sound methodology.

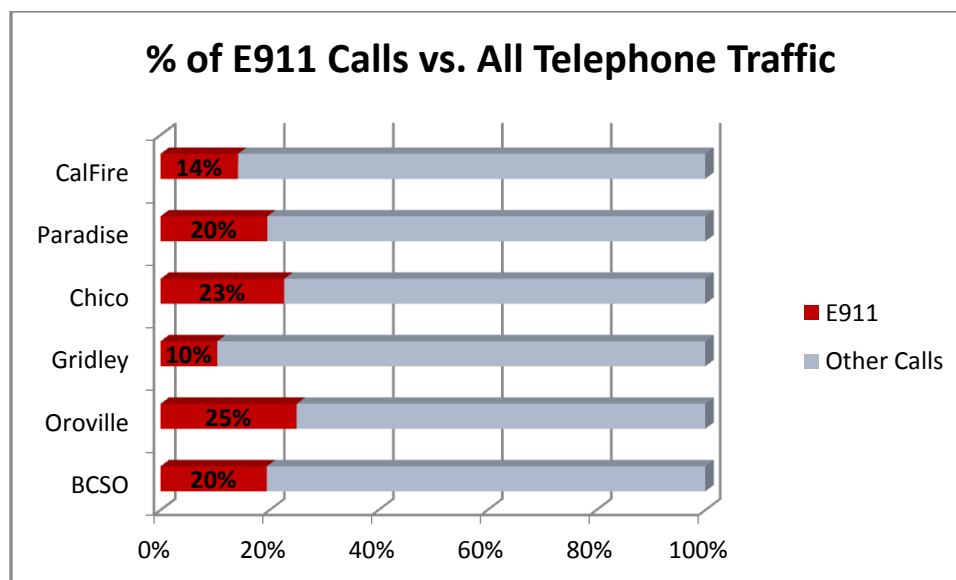
## **(2) Distribution of Telephone Calls Processed.**

Processing telephone calls occupies a significant portion of dispatcher/call taker workload as shown in the prior APCO model. The Erlang model provides a different approach to analyzing call-taker staffing needs if such workload can be separated from dispatch workload as is often done in larger agencies. Emergency and non-emergency calls are handled differently, both in terms of the performance requirements for responding, and the staff members assigned to complete the task. The following graph shows the proportion of E911 calls (including those abandoned) to all in-coming and out-going telephone traffic at each agency.

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<sup>16</sup> Improve Your 9-1-1 Service by Answering the Phone, CDE#31806, APCO January 2012.

<sup>17</sup> The Poisson distribution is most commonly used to model the number of random occurrences of some phenomenon in a specified unit of space or time. For example, the number of phone calls received by a telephone operator in a 10-minute period.



Because E911 and most other calls have different characteristics, they should be considered separately in the Erlang workload model. It should be noted that abandoned calls are treated as emergency calls, as there is no evidence to suggest that these calls are not emergency calls, and as a result warrant the answering requirements as other emergency call types.

With respect to out-going calls, these are not factored into this analysis. While some of these calls are obviously part of the workload handled by dispatcher/call taker staff, the data does not allow for these calls to be filtered from call records that classify as, for example, personal from intra-departmental calls. Most importantly, however, outbound calls can typically be managed and scheduled in the “free time” (i.e. AOR) that dispatchers have between incident processing. The table below presents consolidated telephone data, a portion of which is used in the Erlang modeling.

**Annual Telephone Information for Butte PSAPs**

Call Type	Annual #	Used in Erlang?	Performance Metric
E911 and Abandoned	138,308	Yes	90% Calls answered in 10 seconds
7-digit Incoming Calls	475,202	Yes	70% Calls answered in 20 seconds
Outgoing Calls	184,621	No	n/a

### **(3) Emergency Call Answering Workload.**

The following table details the results of the Erlang formula calculations for answering all emergency calls generated in Butte County. This is used to calculate the fixed-post staffing needs based on the performance standards provided.

**All Agencies - Erlang Call-taker Staff Model Based on E911 Incoming**

<b>Call Information</b>	<b>Metric</b>
Incoming Call Rate (average per half-hour)	7.89
Average Call Duration (seconds)	92
Probability of Target Answer Time (NENA metric)	90%
Target Answer Time (NENA metric)	10 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>2</b>
Expected Probability Performance based on Staff	94%

It is important to note that the Erlang-C model that the project team utilizes bases mathematical formula on half-hour timeframes, thus the noted call rate numbers above. Additionally, the average call duration of 92 seconds is an estimate based on the prior discussion describing the APCO model. The results indicate that to answer E911 calls within the recommended performance metric, an average of two fixed posts are necessary. Given prior net availability data to cover a 24/7/265 operation, this results in approximately ten (10) call-taker staff to process Butte County's emergency call workload.

### **(4) Non-Emergency Call Answering Workload.**

The following table details the results of the Erlang formula calculations for answering non-emergency calls generated in Butte County. This is used to calculate the fixed-post staffing needs based on the performance standards provided.

**All Agencies - Erlang Call-taker Staff Model Based on 7-digit Incoming**

<b>Call Information</b>	<b>Metric</b>
Incoming Call Rate (average per half-hour)	19.23
Average Call Duration (seconds)	92
Probability of Target Answer Time	70%
Target Answer Time	20 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>2</b>
Expected Probability Performance based on Staff	74%

With the threshold of both the target answer time and the service level requirement having been significantly relaxed given these are non-emergency calls for service, performance levels for non-emergency calls are able to be met with an additional two fixed-post positions or approximately ten (10) call-taker staff to process Butte County's non-emergency inbound call workload. The benchmark of 70% of calls answered within 20 seconds is a normative value from several other resources – as different types of call centers have different service level targets<sup>18</sup>. It is this “70/20 result” that our project team finds most reasonable.

Reiterating, with respect to outbound calls, there is no staff modeling that accommodates this. Since outbound calls originate from dispatch center staff, these calls can be typically scheduled in periods of “downtime,” such as that “inactive” period represented by dispatchers’ 50% agency occupancy rate.

**(5) Consolidated Dispatcher Workload.**

Having defined telephone-specific workload in the above Erlang exercise, the APCO staffing model can be revisited exclusively for dispatcher CAD-incident based work. The following table shows the combined workload of the six PSAPs and how this would be handled in a modeled “regionalized” PSAP.

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<sup>18</sup> [http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/issue\\_papers/callcentermetricspaperbestpr.pdf](http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/issue_papers/callcentermetricspaperbestpr.pdf)  
See page 10.

**All Agencies – APCO Staffing Calculations on CAD Incident Workload**

<b>Category</b>	<b>Modeled Regionalized PSAP</b>
Average Task Completion Time Per CAD Incident (in minutes)	2.5
Average Radio Time Per CAD Incident (in minutes)	2.89
Average Processing Time (APT) for CAD Incident (in minutes)	<b>5.39</b>
Total CAD Incidents (2015 period)	238,151
Workload Hours Related to CAD Incidents (Hours)	<b>21,394</b>
Net Annual Available Work Hours	1,708
Agent Occupancy Rate (AOR)	50.0%
True Annual Availability After AOR (Hours)	<b>854</b>
Turnover Rate	17%
FTE Required to Accommodate Turnover @ 50% Occupancy Rate	<b>29.2</b>
Full Time Equivalent Positions (FTE) Required Without Turnover @ 50% AOR	<b>25</b>

As shown above, 25 dispatcher positions would need to be authorized to handle the workloads associated with all Butte County core dispatch work. The following points are noted:

- A theoretical regionalized dispatch center would require 25 authorized dispatch positions and 20 call-taker positions for a total of 45 line staff.
- The six PSAPs in this study currently employ 54 authorized dispatcher/call-taker positions as well as 11 part-time staff.
- The difference between these two operations is 9 fewer full-time dispatcher staff and 11 fewer part-time staff would be needed in a regionalized dispatch operation compared to present PSAP operations.
- Despite fewer overall staff in a regionalized dispatch environment, additional staffing would need to be added back to individual public safety agencies to conduct important ancillary work that could not be accomplished remotely.

The above exercise is only to provide context. Issues such as organization management and supervision, addressing dispatcher ancillary work at various agencies (e.g. front desk work at a police department), capital costs, oversight authority, etc., will

not be addressed as it has been determined in an earlier chapter that this solution is currently not practical for Butte County in the foreseeable future. Nevertheless, the information does suggest that a regionalized dispatch center could operate with at least 20% less line staff than current independent PSAP operations. As such, regionalized dispatch operations should be considered a possible option in the long-term as County-wide circumstances change over the next several years.

***Recommendation: As public safety fiscal and operational changes take place in Butte County over the longer term, re-visit the potential quantitative and qualitative costs and benefits of a single regionalized dispatch center as circumstances dictate.***

## **2. A CHICO PSAP CONTRACT TO OTHER AGENCIES DOES NOT SEEM A VIABLE CONSOLIDATION OPTION GIVEN VARIOUS INDICATORS.**

With regard to one of the two consolidation options for further research that involves Chico providing consolidated dispatch solutions via contract to other agencies excluding BCSO and CalFire, the analysis suggests limited opportunities given the “Four Framing Elements” briefly summarized below:

- **It is Crucial to Minimize Delays in Public Safety Service Response for Effective Service Delivery to the Community.** As noted in detail throughout the body of this report, the impact in delivering timely public safety personnel and apparatus to a call for service scene can be critical. It should be considered an imperative service delivery goal, particularly with respect to the highest priority requests for service.
- **Highly-Trained Professional Dispatchers Employing Consistent Protocols are the Ideal Solution to Effective Public Safety Service Delivery.** Those that make a full-time profession providing public safety dispatch services are typically the most well-trained and thus reliable dispatcher staff. There are assignment approaches in effect throughout the country which use part-time dispatchers positions, sworn staff on temporary assignment, and staff that are performing multiple assignments at a single duty station (i.e. concurrently dispatching fire, medical, EMS and call-taking). While these models work, and by necessity must be used all of the time or part of the time in some (particularly smaller) locales,



the ideal model is deploying a fully-trained dispatcher professional able to focus on a few key service delivery tasks.

- **In an Era of Government Fiscal Constraint, Taxpayers Deserve Highly Effective Dispatch Services at the Most Reasonable Cost.** Performing effective dispatch service at the most reasonable cost should be considered a vital few priority. This requires careful balancing of operating costs against service level requirements and requires some of the most difficult decisions in a dispatch organization.
- **Operational Changes from Alternative Dispatch Delivery Initiatives should have a Net Operational Benefit to Public Safety Services Overall.** Determining “net” benefit is not only a quantitative effort but a qualitative effort as well. Agencies and customers with disparate needs will judge this differently. Nevertheless, it is important to attempt to articulate the “net benefit” from any operational or organizational change.

Based upon the results of the various individual PSAP staff modeling exercises that show very limited opportunity at each PSAP to adjust staffing downwards, economies-of-scale cannot be realized through a Chico consolidation or contracting initiative that operates under a “business as usual” philosophy. Briefly, a dispatch operation that deploys staff in a role of dispatcher and call-taker is not a viable alternative. Chico does, however, currently operate with a call-taker station and separate dispatcher stations as staff deployments periodically allow. Consequently, Chico is familiar with such operations, and these can be modeled using both APCO and Erlang techniques. The following tables, with the processes duplicated from earlier analysis described, show the staffing outcomes associated with Chico providing dispatch services to Oroville, Paradise and Gridley.

**Chico Contract - Erlang Call-taker Staff Model Based on E911 Incoming**

Call Information	Metric
Incoming Call Rate (average per half-hour)	5.16
Average Call Duration (seconds)	92
Probability of Target Answer Time (NENA metric)	90%
Target Answer Time (NENA metric)	10 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>2</b>
Expected Probability Performance based on Staff	97%

**Chico Contract - Erlang Call-taker Staff Model Based on 7-digit Incoming**

Call Information	Metric
Incoming Call Rate (average per half-hour)	11.32
Average Call Duration (seconds)	92
Probability of Target Answer Time	70%
Target Answer Time	20 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>2</b>
Expected Probability Performance based on Staff	90%

**Chico Contract – APCO Staffing Calculations on CAD Incident Workload**

Category	Chico Contract PSAP
Average Task Completion Time Per CAD Incident (in minutes)	2.5
Average Radio Time Per CAD Incident (in minutes)	2.89
Average Processing Time (APT) for CAD Incident (in minutes)	<b>5.39</b>
Total CAD Incidents (2015 period)	161,842 <sup>19</sup>
<b>Workload Hours Related to CAD Incidents (Hours)</b>	<b>14,539</b>
Net Annual Available Work Hours	1,518.5
Agent Occupancy Rate (AOR)	50.0%
<b>True Annual Availability After AOR (Hours)</b>	<b>759</b>
Turnover Rate	13%
FTE Required to Accommodate Turnover @ 50% Occupancy Rate	<b>21.6</b>
<b>Full Time Equivalent Positions (FTE) Required Without Turnover @ 50% AOR</b>	<b>19.2</b>

<sup>19</sup> A relatively small percentage of Fire Incidents would be added here as Chico would then handle fire calls from Paradise and Gridley. These incidents are currently processed by CalFire. CalFire data is not readily available for Paradise and Gridley incidents to calculate this percentage increase. However, as it relates to the analysis' outcome, such an increase in calls does not impact the conclusions or recommendation.

Based on the conclusions that can be derived from the tables above, the following points are noted:

- A Chico contract (or consolidation) initiative involving all four noted dispatch agencies would require 19 authorized dispatch positions and 20 call-taker positions<sup>20</sup> for a total of 39 line staff.
- The four PSAPs noted currently employ 37 authorized dispatcher/call-taker positions as well as 7 part-time staff. There is little difference in staffing levels between existing PSAP operations and a contract scenario with Chico.
- While overall performance would likely increase with respect to answering calls, reducing abandoned calls, providing further staffing flexibility due to having additional resources available, improved staff focus due to unique work station assignments (call-taker or dispatcher versus a combined call-taker/dispatcher positions which is most often used), etc., there is essentially no benefit with regard to staff-related cost savings.
- As it relates to staffing, there would be no real dispatch cost savings to any agency as a consequence of a Chico contract scenario. Indeed, both Paradise and Gridley would likely spend more for such services given the current differential in dispatcher staff salaries as shown in the table below.

**Select Butte County Salary Differentials**

<b>Agency</b>	<b>Mid-Range Salary</b>	<b>Top-Range Salary</b>	<b>Average Difference from Chico</b>
Chico	\$3,689	\$4,269	N/A
Oroville	\$3,698	\$4,281	+\$11
Gridley	\$3,639	\$4,015	(\$152)
Paradise	\$3,122	\$3,526	(\$655)

- In addition to the above, a contract arrangement would not resolve the very important issues surrounding ancillary duties performed by dispatchers, particularly those assigned to Gridley and Paradise.

In summary, based on the “Four Framing Elements” there is no advantage to Oroville, Paradise and Gridley to contract for dispatch services with Chico because:

- While minimizing service delays can potentially be improved, the result would likely be negligible. The four agencies had a combined abandonment rate of

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<sup>20</sup> As shown, the number of call-taker positions is no different in a Chico contract as opposed to a regionalized center. This reflects the benefits of every increasing economies of scale, and while the performance metric expectations of a Chico contract would be higher than a regionalized center, they both reflect more than adequate call-taker performance.

12%, and while this would likely improve with dedicated call-takers, improvement may not be significant. Furthermore, since all four agencies are primary versus secondary PSAPs, minimizing service delays through any significant call transfer reductions is unlikely. There would be modest delay improvements as Gridley would no longer have to transfer fire calls to CalFire as these would be directly handled by Chico's fire dispatcher.

- All dispatchers are trained in the four PSAP agencies involved in this scenario. While they have different roles and responsibilities dependent upon the agency in question, these are not "non-professional dispatchers" temporarily assigned to a dispatcher work station (e.g. deputy assignment in some rural counties). As such, there is no notable overall training benefit associated with a contracting arrangement.
- Particularly given the salary information shown in the previous table, there are no notable cost savings for the communities' taxpayers based on the information provided.
- This contract arrangement would create other issues that would need to be addressed, including identifying methods for completing dispatcher ancillary responsibilities at the smaller agencies; explaining sunk costs for capital expenditures at Oroville, Gridley and Paradise for RIMS CAD software that would no longer be used given Chico uses a different product; etc. Consequently, there is no net benefit to overall public safety through such a contract arrangement.

In conclusion, the possibility of Gridley, Paradise and Oroville contracting with Chico for dispatch services does not demonstrate any notable benefits based on the analysis. As a result, this contract arrangement cannot be considered a PSAP consolidation approach that would be demonstrably beneficial in the foreseeable future.

***Recommendation: Cost/Benefit analyses suggest that Chico serving as a contract dispatch agency to Paradise, Gridley and Oroville does not result in any real net advantages to dispatch service delivery in Butte County, and as such should not be a consolidation option pursued further.***

**3. IN THE FORESEEABLE FUTURE ADDITIONAL DISPATCH CONSOLIDATION BETWEEN GRIDLEY, OROVILLE AND PARADISE OFFERS THE MOST PROMISING ENHANCEMENTS TO DISPATCH SERVICE DELIVERY.**

With regard to the other consolidation option targeted for further research based on previously discussed guidelines, data suggest further consolidation pursuits by

Gridley, Oroville and Paradise offer the greatest opportunities for dispatch and public safety benefit.

**Gridley/Oroville/Paradise - Erlang Call-taker Staff Model Based on E911 Incoming**

<b>Call Information</b>	<b>Metric</b>
Incoming Call Rate (average per half-hour)	2.27
Average Call Duration (seconds)	92
Probability of Target Answer Time (NENA metric)	90%
Target Answer Time (NENA metric)	10 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>1</b>
Expected Probability Performance based on Staff	89%

**Gridley/Oroville/Paradise - Erlang Call-taker Staff Model based on 7-digit Incoming**

<b>Call Information</b>	<b>Metric</b>
Incoming Call Rate (average per half-hour)	5.46
Average Call Duration (seconds)	92
Probability of Target Answer Time	70%
Target Answer Time	20 seconds
<b>Number of Fixed Posts Required to Achieve Standards</b>	<b>1</b>
Expected Probability Performance based on Staff	76%

**Gridley/Oroville/Paradise – APCO Staffing Calculations on CAD Incident Workload**

<b>Category</b>	<b>Chico Contract PSAP</b>
Average Task Completion Time Per CAD Incident (in minutes)	2.5
Average Radio Time Per CAD Incident (in minutes)	2.89
Average Processing Time (APT) for CAD Incident (in minutes)	<b>5.39</b>
Total CAD Incidents (2015 period)	83,443
<b>Workload Hours Related to CAD Incidents (Hours)</b>	<b>7,496</b>
Net Annual Available Work Hours	1,752
Agent Occupancy Rate (AOR)	50.0%
<b>True Annual Availability After AOR (Hours)</b>	<b>876</b>
Turnover Rate	17%
FTE Required to Accommodate Turnover @ 50% Occupancy Rate	<b>10.0</b>
<b>Full Time Equivalent Positions (FTE) Required Without Turnover @ 50% AOR</b>	<b>8.6</b>

Based on the conclusions that can be derived from the tables above, the following points are noted:

- A Gridley/Oroville/Paradise consolidation initiative involving these three dispatch agencies would require 8 full-time authorized dispatchers, 1 part-time authorized dispatch position and 10 call-taker positions for a total of 18.5 line staff.
- The three PSAPs noted currently employ 19 authorized dispatcher/call-taker positions as well as 6 part-time staff. There is little difference in staffing levels between existing PSAP operations and a three-agency consolidated option. Consequently, dispatcher-related costs through consolidation would likely not be saved.

With respect to “Four Framing Elements,” however, there are potential qualitative and quantitative benefits available, though there are downsides that are partially off-setting. The following points are made.

**(1) Minimizing Public Safety Service Response.**

Because of the geographic separateness of Gridley, Oroville and Paradise, there are no demonstrable cell phone calls being misrouted to one of these agencies which require a call transfer to one of the other two partnering agencies. This is a technological issue facing public safety agencies in close proximity to one another and an issue that leads to service level delays. These agencies do not suffer from this problem. Nevertheless, both Gridley and Paradise do reroute their fire/medical calls to CalFire, and as such service delays are created. Since Oroville also dispatches fire/EMD in addition to police services, it is assumed a consolidated agency would provide both kinds of dispatch services, thereby eliminating the call transfer issue with CalFire.

**(2) Deployment of Professional Dispatch Staff.**

As the three involved PSAPs field professionally trained dispatchers, this framing element does not result in a substantive benefit. However, given smaller agencies do not have the magnitude of core dispatch workload associated with larger agencies, it

can be argued that larger agencies allow personnel to better practice the “science of their craft.” Despite this perception, this potential benefit would not nearly be sufficient to justify consolidation on its own merits.

### **(3) Service Costs to the Taxpayers.**

As noted above, the line staffing currently deployed in the three PSAPs is only slightly higher than what is required based on a consolidated model of the three agencies. Interestingly, based on core dispatch and telephone workloads a consolidation of Gridley, Oroville and Paradise would nearly mirror the workload requirements of present-day Chico. In summary, the expenses of a consolidated Gridley, Oroville and Paradise operation would, in sum, exceed the three independent agencies based on a potential consolidated dispatch organization as shown in the table below.

**Potential Gridley/Oroville/Paradise PSAP Organization and Cost Model Information**

<b>Position</b>	<b>Staffing Three Independent PSAPs</b>	<b>Staffing Consolidated PSAP</b>	<b>Staffing Chico Comparison</b>	<b>Likely Cost or Saving Incurred?</b>	<b>Est. Cost Difference<sup>21</sup></b>
Manager	0	0	1	N/A	N/A
Supervisor	1	1	4	Cost	+\$3,600
Lead Dispatcher	0	4	0	Cost	+\$195,000
F/T Dispatcher <sup>22</sup>	19	14	18	Savings	-\$85,000
P/T Dispatcher	6	1	1	Savings	variable
CalFire Dispatcher <sup>23</sup>	.5	0	N/A	Savings	-\$39,000
Clerk	0	4	0	Cost	+\$204,000
				<b>TOTAL:</b>	<b>+\$278,600</b>

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<sup>21</sup> Estimates based on mid-tier salaries at Oroville costs, clerk compensation positions at Gridley, and other similar information.

<sup>22</sup> While a dispatcher would be the recommended job classification, in the consolidation model these positions would be rotated through a call-taker only work-station.

<sup>23</sup> Gridley would save the costs of ½ FTE currently paid to CalFire. Paradise cannot save these amounts as CalFire also provides fire suppression services to the City.

With regard to actual costs or savings incurred in a consolidated PSAP, this would be based on numerous factors that would need to be resolved to include the following key issues:

- Dispatch supervision has various guidelines but it is both a policy and operational decision based on fiscal and other factors. The above table shows increased supervision for a consolidated center that would incur the attendant costs. While such supervision for the consolidation organization is not classified at the same job level as Chico, it does provide equivalent supervision capacity but at an increased costs compared to current independent PSAP operations.
- As noted in an earlier table the salary structure of Oroville exceeds that of Gridley which exceeds that of Paradise. A consolidated organization would need to address salary and benefit inequities and in doing so costs would probably rise in a consolidated agency compared to independent counterparts. In sum, a consolidated operation would more closely align with Oroville's compensation structure.
- Of great importance in a consolidated PSAP is resolving the ancillary work that would need to be accomplished for Gridley and Paradise by staff other than dispatchers. It is the project team's assumption that a consolidated center would be located at Oroville given the present space and layouts of the various PSAP agencies. To that end, Gridley and Paradise would need to accomplish various tasks now performed by dispatchers at their own police site. It is estimated that this would require two (2) Records Clerks at each locale to perform the bulk of responsibilities presently undertaken. Since ancillary dispatch duties cannot be quantified in this study, this is only a staff projection. Indeed, it is also recognized that some operational procedures will have to change at this staffing level. For example, the 24-hour front desk operation at Gridley PD will not be able to function with this level of clerk deployment. Furthermore, this clerk staffing is an additional cost that would be incurred by these dispatch agencies.

In summary, there would likely be modest costs associated with the consolidation of Gridley, Oroville and Paradise compared to their independent counterpart PSAP operations with annual costs estimated at nearly \$278,000 per year. Because new positions would be hired and located at Gridley and Paradise, nearly three-quarters of this cost would be incurred between these two municipalities. As such, the final framing



element is critically important in helping to determine the viability of this consolidation option.

**(4) Net Operational Benefit to Public Safety Services Overall.**

One of the important issues that has driven dispatch consolidation initiatives throughout the nation is the recognition that smaller dispatch agencies composed of only a few personnel have the potential for several operational risks that can ultimately impact public safety services. Dispatch operations that field only one staff member at certain times of the day can face many challenges that their larger PSAP counterparts do not experience. These include:

- A reduced ability to handle multiple concurrent public safety incidents. This is particularly problematic when these incidents are calls for service of the highest priority.
- Increased physical fatigue levels as a consequence of multiple factors to include limited if any meal and break relief, excessive overtime in the case of long term colleague absenteeism or vacancies, and similar factors.
- Increased emotional and mental fatigue as a result of frequently working alone. There is a variety of research related to the additional risks of working solo. One international research study by the *National Research and Development Institute for Labor Protection* indicated:

*The effects of the risk factors in isolation work conditions are mainly psychological to include “psycho-affective” reactions from absence of human presence resulting in decreasing vigilance levels, lack of usefulness feelings, etc. as well as “cognitive” reactions whereby operators in critical conditions could miss some information necessary to optimal intervention.<sup>24</sup>*

In sum, the operation of a single-dispatcher PSAP fundamentally carries additional risks compared to their multi-personnel counterparts. According to an article in an *IMSA* periodical, “Having only one dispatcher on duty is risky. It may be a fiscal

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<sup>24</sup> Working in Isolation – Risk Factors and Effects on Mental Health State. Ergonomic Department National Research and Development Institute for Labor Protection, page 3.

requirement, but it is nonetheless risky and every reasonable step should be taken to avoid it.”<sup>25</sup>

Given the modest annual projected costs associated with further consolidation of dispatch services for Gridley, Oroville and Paradise, the quantitative and qualitative benefits appear to outweigh the overall financial costs and minor service reductions in various areas (e.g. 24-hour front counter support). Consequently, transitional information for this consolidation initiative will be provided in the next chapter.

***Recommendation: Cost/Benefit analyses suggest that further dispatch consolidation of Paradise, Gridley and Oroville would result in a net benefit to dispatch service delivery in Butte County based on various quantitative and qualitative factors, and as such should be a consolidation option to be implemented over the nearer term.***

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<sup>25</sup> Dispatch Column, IMSA Journal Feature Article, September/October 2003, page 3.

## **7 Transitional Requirements for Consolidation of Services**

The following chapter discusses key transitional issues to consider in moving toward the Gridley, Oroville, and Paradise consolidation model. Some issues are more important than others and many are applicable to any consolidation initiative. These issues should be “checked off” during any formal implementation plan to ensure potential consolidation impediments are addressed proactively.

### **1. A CONSOLIDATION TRANSITION MUST CONSIDER RE-NEGOTIATION OF SALARIES AND BENEFITS.**

Perhaps one of the greatest impediments to successfully transitioning to a consolidated dispatch agency is the reconciliation and equalization of disparate wages, salaries and working conditions among the independent agencies involved. As shown in a prior table, there is a large difference in salary compensation between Paradise and its two counterpart agencies. A review of the bargaining unit agreements and other documentation provided shows that there are relevant differences in compensation packages – but nothing that should be insurmountable. This cost difference was accounted for in the prior chapter’s modeling exercise, and although a salary increase for many “consolidated dispatchers” would be in the offing, the overall annual cost would be relatively modest.

***Recommendation: Equalize salary and benefits for Gridley, Oroville and Paradise staff in a consolidated agency through a renewed negotiation process and new collective bargaining agreement.***

### **2. A TRANSITION TO A CONSOLIDATED AGENCY WILL REQUIRE A COMMON LABOR RELATIONS APPROACH.**

With different bargaining units and approaches now in place for Gridley, Oroville and Paradise, a consolidated agency would essentially require dissolution of agency-

specific groups and pursuit of a new bargaining group model. The municipalities' general councils can participate in developing the appropriate bargaining unit framework for a consolidated model.

***Recommendation: As part of a consolidated implementation strategy, develop a new bargaining unit and representation model for Gridley, Oroville and Paradise.***

**3. FINALIZE THE LOCATION OF A CONSOLIDATED DISPATCH CENTER. PRELIMINARY ANALYSIS SUGGESTS OROVILLE PD AS THE MOST LIKELY SITE.**

In any consolidated effort, location of the dispatch agency is a fundamental issue of importance. The three agencies each have facilities and rely on each other for a back-up dispatch location, thus potential plans for a joint center will require contingency plans for a dispatch back-up in case of disaster-related emergencies. This would likely be Chico or the Butte County Sheriff's Office. Of more significance, identifying the locale for the "centralized" dispatch operation is critical. Our tours of the various locales indicate that Oroville PD is most practical site for a consolidated center, although vacating Paradise and Gridley results in the issues noted previously in this report. This choice would have to be finalized before a consolidation initiative can be pursued.

**(1) Option to a Centralized Dispatch Facility.**

As shown earlier in this report, consolidation options exist beyond "brick-and-mortar" full consolidation options. Virtual Consolidation is a consolidation in the sense that the three dispatch centers would almost completely operate as one integrated operation, seamlessly answer 911 and ten-digit emergency calls as they come in, enter calls for service in the same RIMS CAD system and, as feasible, dispatch each other's units. In the course of this option, however, the Gridley, Oroville and Paradise PSAPs would still remain in separate facilities and would suffer most of the same

disadvantages associated with one-dispatcher operations. Reiterating, it is largely the qualitative and incalculable benefits associated with the overall improvements to public safety and the personnel providing this service that justifies a full consolidation effort. If these perceived benefits and costs are not shared among the partners involved, a virtual consolidation model appears a potential alternative.

***Recommendations:***

***As part of consolidation transition, first determine the feasibility of using the existing Oroville facility as the consolidated agency location of choice. If deemed unsuitable, pursue other facility options.***

***As it relates to consolidation, develop a back-up dispatch center emergency protocol involving Chico or secondly Butte County Sheriff Office.***

***In the event full consolidation between Gridley, Oroville and Paradise is not possible, pursue Virtual Consolidation efforts as existing relationships and CAD software would help facilitate this approach.***

**4. ADOPT A FORMAL ORGANIZATIONAL STRUCTURE FOR THE CONSOLIDATED CENTER.**

A suggested staffing and supervisory structure was developed in the prior chapter for the consolidated agency. While the project team believes this structure is appropriate the participating agencies may believe otherwise. As such, finalization of an organizational structure to include staff job classifications such as supervisor, lead dispatcher, and/or call-taker is necessary.

***Recommendation: Finalize the dispatch organizational structure including management, supervision and line job classifications using guidelines provided in this report.***

**5. A TRANSITION TO A CONSOLIDATED AGENCY WILL REQUIRE ADDRESSING MANY OTHER IMPORTANT OPERATIONAL AND CULTURAL ELEMENTS BEFORE BEING FULLY IMPLEMENTED.**

There are a number of key steps that must be taken with respect to agency consolidation, and these must be phased in as precursors to complete consolidation.

Some of these efforts include but are not limited to the following six key areas:

- **Establishment of mutually agreeable training programs.** A comprehensive training update needs to be performed related to consolidation with regard to a new employee orientation and training regimen; in-service training requirements; remedial training; and critically, a cross-training program for the existing agencies' staff
- **Developing common standard operating procedures (SOPs).** The most practical method for merging SOPs is an ad-hoc committee of Gridley, Oroville and Paradise representatives dedicated to reviewing all Standard Operating Procedures and making appropriate revisions. Members must have both significant knowledge and sufficient authority to make binding recommendations for SOP revision to avoid a "draft and re-draft syndrome."
- **Resolution of cultural differences.** Beyond the key transitional elements to consider related to consolidating emergency communications agencies, "non-communication" elements also need to be considered. These are the more qualitative elements that are an outgrowth of each agency's culture, vision and mission, and these provide an opportunity to ensure user input and participation in identifying potential issues and problem resolution. According to the previous chapter's employee survey, 30%-40% did not have favorable opinions regarding consolidation and as such, this cultural viewpoint would have to be mitigated.
- **Addressing (minor) outstanding technology issues.** The three agencies are very well positioned with regard to telephone and CAD system compatibilities and as a result technology issues are secondary in this consolidation initiative (unlike most such initiatives). Nevertheless, any technology gaps and differences in the use of such technologies would need to be addressed.
- **Devising a fair cost allocation model.** Generally all dispatch centers, consolidated or otherwise, that dispatch for multiple agencies have a cost apportionment model that allocates costs and recoups the associated fees for service based on some perceived "fair share" cost allocation strategy. Ultimately, the charge-back formulae that are used are somewhat immaterial as long as 1) the end-user public safety clients believe that costs are equitably distributed, 2) there is an ability to easily explain the charge-back methodology to the large majority of end-users, and 3) there is an ability to audit the charge-back

methodologies. What is particularly important is ensuring that a consistent charge-back approach is used for all the public safety organizations involved with the dispatch agency. CalFire uses different charge-back approaches dependent upon the agency for which they contract. Our project team usually emphasizes a charge-back model based on workloads such as incidents and calls for service.

- **Developing an oversight/governance model.** In the project team's experience, one of the primary reasons for the failure of many consolidation efforts is the inability to reach consensus on a governance model perceived as equitable among all participating agencies in a consolidation scenario. Whereas these differences are relevant, they are manageable. Consequently, this issue will have to be addressed as part of the consolidation initiative.

In order to address the multiple issues associated with a successful transition to a consolidated model, the development of a formal project implementation plan must be devised in an endeavor of this scope to ensure these potential pitfalls are addressed proactively. Indeed, development of a written project plan that implements any phase of consolidation is the first key step.

#### **(1) Develop a Project Implementation Plan to Facilitate Successful Transition.**

A project plan is the outcome of project management techniques consistent with best management practices. Project management is defined by the Project Management Institute as, "the application of knowledge, skills, tools, and techniques to a broad range of activities in order to meet the requirements of a particular project." Key project management elements are abstracted from the Project Management Body of Knowledge (PMBOK) standards sponsored by the *Project Management Institute (PMI)*—the preeminent organization for project management best practices. Based upon the overarching philosophy of these techniques, the project team believes several project management principles should be applied to a consolidation initiative and development of a project implementation plan. These reflect the following eight areas that comprise the core project management process:

- Preparation of a project (transition) budget;
- Definition of the project, including its scope, staff resources required, project costs, and project priority;
- Establishment of plans and schedules for each key phase to determine what tasks are to be performed internally and by private contractors (as applicable), as well as the start, end and milestone dates;
- Monitoring and regularly reporting the progress against each element of the schedule for each phase;
- Maintenance of the financial control systems necessary to ensure timely reports on current expenditures of funds for phase of the plan;
- Development of a system to alert top management to cost, schedule, legal and other difficulties, and unusual circumstances encountered during the course of the project;
- Management of the staff and consulting resources involved in the project in order to adjust to changes in priorities and project mixes as well as to enable completion of the project on schedule and within budget; and.
- Management and coordination of the interfaces needed to complete the project.

The U.S. Department of Transportation discusses in-depth the need for transition planning in their own Transition Plan document for NG911 (next generation services), stating articulately the need for transition planning, “To facilitate the migration to the NG911 system, it is critical to understand and assess transition issues and identify potential options to resolve or address these issues. Without a clear understanding of the potential challenges and options to overcome the obstacles, the deployment of NG911 may extend over an inordinate length of time.”<sup>26</sup> This philosophy is true for all major initiatives, whether federal, state, local government or private enterprise.

In conclusion, the development of a formal project implementation plan coinciding with effective project management will minimize the risk of any service

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<sup>26</sup> [http://www.its.dot.gov/ng911/pdf/NG911\\_Transition\\_PlanFinal.pdf](http://www.its.dot.gov/ng911/pdf/NG911_Transition_PlanFinal.pdf), page 1.



delivery impacts resulting from the transition. As such, it should be considered a vital first step in a consolidation process.

***Recommendations:***

***Develop an ad-hoc committee of professional staff from Gridley, Oroville and Paradise to develop a comprehensive Project Implementation Plan for consolidation that would precede implementation of a consolidated agency. Anticipate approximately nine to twelve months for development of a final Plan that would address the multiple implementation issues, including the six key areas, raised in this report. The entire consolidation initiative should take approximately 18 months.***

***Identify a project manager from one of these agencies that serves on the consolidation transition project and task with executing a formal transition plan consistent with PMBOK principles.***

## APPENDIX

### Best Management Practices Matrix

Best Practices Target / Initiative	BCSO	Chico	C-Fire	Gridley	Oro	Para
<b>KEY:</b> ✓ is Best Practice Target Met “Blank field” is Best Practice Target Not Met ✦ is unknown based on data provided NA is Not Applicable						
<b>PSAP Management and Operations</b>						
A public safety dispatch center is utilized, that jointly dispatches law enforcement and fire calls for service.		✓			✓	
Communication centers perform operations consistent with the Minnesota Office of the Legislative Auditors “Seven Actions for PSAPs” to include: <ol style="list-style-type: none"> <li>1. Develop and use SOPs.</li> <li>2. Support a trained and qualified workforce.</li> <li>3. Maintain adequate communications and network equipment.</li> <li>4. Explore cooperative equipment-sharing and dispatching opportunities.</li> <li>5. Keep records and measure performance.</li> <li>6. Promote info. Exchanges among public safety response agencies.</li> <li>7. Educate the public on the 9-1-1 system and services.</li> </ol>	✓	✓	✓	✓	✓	✓
A backup PSAP has been established for the communication center(s).	✓	✓	✓	✓	✓	✓
Uninterruptible power supplies and backup generators are available to prevent power disruptions from interrupting calls in progress or incoming calls.	✓	✓	✓	✓	✓	✓
Communication centers have developed and utilize written policies and procedures.	✓	<sup>27</sup>	✓	✓	✦	✓
Policies and Procedures contain detailed dispatch protocols with respect to service areas for which they dispatch (law, fire, EMD, animal control, etc.).		ibid	✓	✓	✦	✓
Communications centers have developed a Strategic Plan outlining future direction and opportunities based on growth, changing technologies, etc.						
Communications centers are currently NG 911 capable.	✓	✓	✓	✓	✓	✓

<sup>27</sup> Chico has P&P in their current training manual but not in a separate document.

<b>Best Practices Target / Initiative</b>	<b>BCSO</b>	<b>Chico</b>	<b>C-Fire</b>	<b>Gridley</b>	<b>Oro</b>	<b>Para</b>
90% of the 9-1-1 calls are answered within 10 seconds consistent with NENA standards.	+	✓	+	+	+	+
Fire dispatch transactions are completed within 90 seconds 90% of the time and within 120 seconds 99% of the time (call receipt to tone-out) per NFPA 1221.	NA	✓	+	NA	+	NA
Emergency Alarms are processed within 60 seconds 80% of the time and within 106 seconds 95% of the time per NFPA 1221.	NA	✓	+	NA	+	NA
A call priority system has been developed and is implemented that effectively distinguishes between low, medium and high priority calls for service.	✓	✓	+	+	+	+
All dispatchers have training that meets or exceeds APCO (Association of Public-Safety Communications Officials International, Inc) or equivalent training guidelines.	✓	✓	✓	+	✓	✓
Centers that dispatch Emergency Medical Services (EMS) first-responder and/or ambulance have a MPDS (medical priority dispatch system) in place consistent with numerous standards.	NA		✓	NA	✓	NA
Centers that dispatch EMS, first-responder, and/or ambulance are Emergency Medical Dispatcher (EMD) certified.	NA		✓	NA	+	NA
Centers that dispatch EMS utilize Fire Priority Dispatch System (FPDS) protocols consistent with IAED (International Academies of Emergency Dispatch).	NA		+	NA	+	NA
Centers that dispatch Fire are Emergency Fire Dispatcher (EFD) certified consistent with IAED.	NA		+	NA	+	NA
Centers that dispatch Law Enforcement are Emergency Police Dispatcher (EPD) certified consistent with IAED.			NA			
The communication center is CALEA (Commission on Accreditation for Law Enforcement Agencies, Inc.) accredited and/or IAED ACE (Accredited Center of Excellence) certified.			NA			
A quality assurance (QA) program is in place to assure calls for service compliance with established protocols.	+	✓	✓	+	+	+
Calls for service, CAD incidents and other law/fire/medical metrics are run on a regular basis to track performance to standards and assist in management decision making.	+		+	+	+	+
The communications center has established a complaint tracking and resolution program.	+		+	+	+	+
Communication centers have designed and maintain a MSAG (master street address guide) on a consistent basis.	✓	✓	✓	✓	✓	✓

Best Practices Target / Initiative	BCSO	Chico	C-Fire	Gridley	Oro	Para
In-vehicle computers are utilized in patrol sedans to reduce the extent of dispatcher workload such as records checks.	✓	✓	✓	✓	✓	✓
Communication center staff are largely civilians.	✓	✓	✓	✓	✓	✓
A 9-1-1 telephone cost recovery fee or similar dedicated financial source is utilized to finance the operations of the dispatch center.						
Equipment, furniture and facilities have been spatially and ergonomically designed to reduce environmental stresses, the risk of repetitive motion injuries, eye strain due to lighting and constant use of CRT/LCD screens, etc.	✓	✓	✓	✓	✓	✓
The dispatch and radio equipment is well maintained by telecommunications staff. Equipment and software is upgraded and/or exchanged on an appropriate replacement cycle.	✓	✓	✓	✓	✓	✓
<b>Recruitment, Retention and Selection</b>						
The organization has a formal Recruitment (Strategic) Plan containing a clear marketing/outreach plan with measureable outputs and outcomes to determine success.						
Marketing efforts formalized in a strategic plan or otherwise, focus on key job satisfaction (e.g. community service) and compensatory benefits of becoming a dispatcher versus pursuing other professions.						
As part of effective marketing, the organization has developed an effective “employer brand” to attract qualified applicants (e.g. best technology in the region).						
As part of strategic planning, The organization has developed a formal criterion, and profile, for the types of applicants desired, resulting in attracting the “right” candidate types as opposed to weeding out the “wrong” candidates.		✓				
Recruitment is coordinated with other public safety entities within the larger government agency.	✓	✓	NA	NA	✓	NA
The job description is consistent with the expectations and knowledge, skills, and abilities required of the job.	✓	✓	✓	✓	✓	✓
Job classifications are regularly reviewed and updated to ensure changes in job complexity; duties and responsibilities are properly represented and subsequently reflected in job descriptions; this includes response by HR to requests from The organization for review.	✓	✓	✓	✓	✓	✓
The organization effectively advertises in various local, regional and national mediums and has a dedicated budget for such advertising.	+	✓	+	+	+	+

<b>Best Practices Target / Initiative</b>	<b>BCSO</b>	<b>Chico</b>	<b>C-Fire</b>	<b>Gridley</b>	<b>Oro</b>	<b>Para</b>
The organization participates in various recruiting methods, including career days, job fairs, and other events.	+		+	+	+	+
The organization uses a dedicated and regularly updated website as a cornerstone of cost-effective recruitment marketing.		✓				
The website publishes the organization's vision, mission, history, job expectations, and prominently displays the minimum qualifications for employment.						
The website includes a video advertisement of agency dispatch operations in streaming video or similar technology.						
To expedite self-screening given the technological requirements of a dispatch position, applications are only accepted through the internet.	+	✓	+	+	+	+
Market surveys are periodically conducted (full comp/class every 6-8 years) by Human Resources to compare salaries and benefits against market competitors.	+	✓	+	+	+	+
A thorough process of identifying, selecting, training, and evaluating recruiters has been completed. The organization communicates that effective recruitment is a high priority.	+		+	+	+	+
Identified recruiters have received formal recruitment training consistent with CALEA or other professional standards.						
The organization encourages word-of-mouth advertising and then rewards employees for identifying qualified applicants who join the organization.	+		+	+	+	+
The process for selection of recruits is thorough in terms of assessing a candidate's qualifications and job suitability.	+	✓	+	+	+	+
The application/selection process has been streamlined to contain only essential steps necessary to confirm a candidate's probable job success. The process is consistent with other dispatcher selection programs.	+	✓	+	+	+	+
Lateral candidates undergo a streamlined application/selection process.	+	✓	+	+	+	+
The application process is expedited to limit wait time from the prospective candidate's perspective. By example, Background Investigations take a reasonable amount of time (an average of less than two months from initial application received until the background check is completed).	+		+	+	+	+
The organization offers a competitive compensation package consistent with the region.	✓	✓	✓	✓	✓	

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Best Practices Target / Initiative	BCSO	Chico	C-Fire	Gridley	Oro	Para
The organization offers cost-of-living salary adjustments.	✓				✓	✓
The organization offers incentives such as longevity pay, tuition reimbursement, etc., consistent with regional competitors.	✓	✓	✓	✓	✓	✓
Compensation practices recognize the achievement of specialized skills (e.g. CTOs) and/or certifications.	✓	✓	✓	✓	✓	✓
The organization offers job-sharing, part-time employment and other flexible work options.	✓	✓		✓		✓
The organization has up-to-date facilities and technologies and ergonomically-designed work stations.	✓	✓	✓	✓	✓	✓
The organization ensures most breaks and meals are taken away from work stations.		✓	✓		✓	
The organization has an effective performance management program (annual written evaluations) to award high performance and discourage/remediate low performance.	+	✓	+	+	+	+
The annual performance evaluation includes a career development component including: development of annual training plan, development of annual performance goals, etc.	+	✓	+	+	+	+
Training is provided to meet basic in-service update training and required certifications.	✓	✓	✓	✓	✓	✓
In-service training hours average at least 40 hours per employee per year.						
All newly assigned supervisors attend a mandatory supervisory class.	✓	✓	✓	✓	✓	✓
Employees are able to participate in task forces, when feasible, in areas of personal interest.	+	✓	+	+	+	+
Periodic rotation of individuals assigned to specialized positions (e.g. training, technology support, etc.) is conducted to provide opportunities for all interested employees to participate.	NA	NA	NA	NA	NA	NA
The collective bargaining agreement provides a clear policy for filing grievances.	✓	✓	✓	✓	✓	✓
The organization employs a formal career development program to promote professional growth, to inspire personal motivation and to enhance effectiveness.	+	+	+	+	+	+

<b>Best Practices Target / Initiative</b>	<b>BCSO</b>	<b>Chico</b>	<b>C-Fire</b>	<b>Gridley</b>	<b>Oro</b>	<b>Para</b>
Exit interviews are routinely conducted to determine the causes for turnover.	✦	✓	✦	✦	✦	✦
Exit interviews' data is collected and analyzed to determine possible trends that can be rectified.	✦		✦	✦	✦	✦

## APPENDIX Preliminary Issues Assessment



### CONSOLIDATION FEASIBILITY STUDY

**Preliminary Issues Assessment** – The purpose of this issues assessment is to document various operational and strategic issues based on preliminary analysis that are impactful to the findings, conclusions and recommendations of the Consolidation Feasibility Study.

While the terminology “issues” is often assumed as “problems,” this is not the purpose of this issues assessment document. Rather, issues represent the more formal definition of topics or subjects of importance. These issues reflect areas of interest the project team noted during the assessment thus far, a precede finalization of analysis and development of report findings, conclusions and recommendations. These issues are not the only topic areas that will be discussed in the report. They do, however, represent key topics that feedback and guidance from the project steering committee and study participants will prove valuable. As a result of feedback, these issue areas are subject to be de-emphasized, augmented or changed.

### Key Issues by Area: PSAP Organizations’ Requirements

Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>CalFire Requirements</b>	<ul style="list-style-type: none"> <li>CalFire is legislatively restricted in the method by which CalFire can be dispatched.</li> <li>CalFire cannot participate in a regionalized dispatch efforts unless they are the lead agency, and only for fire/EMD services.</li> <li>Consequently, CalFire can only contract to public safety agencies for fire/EMD dispatch. There is no standard model for cost of contracting dispatch services.</li> </ul>	<ul style="list-style-type: none"> <li>CalFire legislative restrictions significantly impact their dispatch consolidation options.</li> </ul>



Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>BCSO Requirements</b>	<ul style="list-style-type: none"> <li>• BCSO leadership believes regionalized dispatch services have too many risks relative to benefits.</li> <li>• BCSO would consider serving as a regional provider for law enforcement dispatch only, but is not aggressively looking for opportunities in this area.</li> <li>• BCSO is in the initial stages of identify new CAD/RMS/JMS software and is unlikely to obtain a vendor solution consistent with other Butte County PSAP CAD systems.</li> </ul>	<ul style="list-style-type: none"> <li>• BCSO requirements impact their dispatch consolidation options.</li> </ul>
<b>Chico Requirements</b>	<ul style="list-style-type: none"> <li>• Chico is a police, animal control and fire dispatch operation and consolidation options would therefore require consideration for such services.</li> <li>• Chico has recently approved and invested significant funds and time into a new CAD system with the same vendor (SunGard) as their legacy CAD.</li> <li>• Consolidation alternatives would essentially require a consolidated operation to base dispatch operations on this CAD product.</li> <li>• Chico is the only agency that regularly assigns a dedicated call-taker console.</li> <li>• Given the size of Chico's dispatch operation, many consolidation alternatives would require operations at their police facility or a new separate center.</li> </ul>	<ul style="list-style-type: none"> <li>• Recent purchase of new CAD software limits consolidation flexibility to a degree as such an investment would necessitate a carry-forward to a consolidate option for this CAD product.</li> <li>• A consolidation option would have to consider Chico's need for law, animal control and fire dispatch services.</li> <li>• A consolidation option would have to consider Chico's requirement to have a dedicated fire dispatch console staffed 24/7.</li> </ul>

Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>Oroville Requirements</b>	<ul style="list-style-type: none"> <li>Oroville is both a police and fire dispatch operation and consolidation options would therefore require consideration for such services.</li> <li>Oroville has had recent prior experience with CalFire providing such dispatch and does not have an intention to contract for such services in the foreseeable future.</li> <li>Oroville is one of four Butte County agencies who have invested in the RIMS CAD software solution.</li> <li>As with many Butte PSAPs, Oroville has some unique ancillary duties that include the monitoring of ~40 cameras located throughout the City of Oroville.</li> </ul>	<ul style="list-style-type: none"> <li>A consolidation option would have to consider Oroville's need for both law and fire dispatch services.</li> <li>A consolidation option would not involve using CalFire as a dispatch agency in the foreseeable future.</li> <li>A consolidation option would need to address Oroville's unique dispatcher ancillary duties.</li> <li>Oroville's (and others) CAD investment in RIMS software is a factor for consideration in any consolidation alternative.</li> </ul>
<b>Paradise Requirements</b>	<ul style="list-style-type: none"> <li>Paradise is a police and animal control dispatch operation with fire/EMS dispatch contracted to CalFire operating as a secondary PSAP.</li> <li>Paradise is one of four Butte County agencies who have invested in the RIMS CAD software solution.</li> <li>As with many Butte PSAPs, Paradise has some unique ancillary duties that include several Records-related functions as well as customer front counter staffing for 3-hours daily.</li> </ul>	<ul style="list-style-type: none"> <li>A consolidation option would need to address Paradise's unique dispatcher ancillary duties.</li> <li>Paradise's (and others) CAD investment in RIMS software is a factor for consideration in any consolidation alternative.</li> </ul>

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Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>Gridley Requirements</b>	<ul style="list-style-type: none"> <li>• Gridley is a police dispatch operation with fire/EMS dispatch contracted to CalFire operating as a secondary PSAP.</li> <li>• Gridley contracts services to the nearby community of Biggs which must be accounted for in consolidation initiatives.</li> <li>• Gridley is one of four Butte County agencies who have invested in the RIMS CAD software solution.</li> <li>• As with many Butte PSAPs, Gridley has some unique ancillary duties that include several Records-related functions, clerical functions, as well as 24/7 customer front counter staffing.</li> </ul>	<ul style="list-style-type: none"> <li>• A consolidation option would need to address Gridley's unique dispatcher ancillary duties.</li> <li>• Gridley's (and others) CAD investment in RIMS software is a factor for consideration in any consolidation alternative.</li> <li>• Gridley's contract for service to Biggs must be considered in any consolidation option.</li> </ul>
<b>Cal State Chico</b>	<ul style="list-style-type: none"> <li>• Despite initial intent, Cal State Chico has chosen to not be involved in the consolidation feasibility study.</li> </ul>	<ul style="list-style-type: none"> <li>• Cal State Chico will not be incorporated into any consolidation option alternatives.</li> </ul>

Key Issues by Area: PSAP Dispatcher Workloads		
Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>Incident-based Workload</b>	<ul style="list-style-type: none"> <li>Incident-based workload varies widely from PSAP to PSAP indicating different CAD recording approaches and widely different workloads among agencies.</li> <li>Oroville has the greatest CAD incident per population at 2.9 incidents per resident. Oroville does police and fire dispatch.</li> <li>Paradise has the lowest CAD incident per population at 0.77 incidents per resident. Paradise dispatches police and animal control.</li> <li>Both Paradise and Oroville use the same CAD software.</li> <li>In sum, incident-based workloads in the Butte County PSAPs can be different by a magnitude of nearly 4x, reflecting a variety of factors impacting CAD incident workload.</li> </ul>	<ul style="list-style-type: none"> <li>Recognition that there are different CAD-based workload requirements for the varied PSAPs and methods for recording core dispatch work, are important in considering consolidation efforts.</li> <li>Widely disparate workloads can be impactful in determining consolidation possibilities and the related staffing requirements.</li> </ul>

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<b>Telephone-related Workload</b>	<ul style="list-style-type: none"> <li>• E911 and seven-digit telephone workload also varies widely from PSAP to PSAP though not to the same order of magnitude as CAD incidents.</li> <li>• Oroville, again, has the greatest incoming telephone calls per population at 3.9 calls per resident. BCSO has the fewest at 1.5 calls. This ranking also holds for outgoing calls at 1.6 and 0.55, respectively.</li> <li>• Gridley, the smallest community by a large margin, processes the second greatest incoming telephone calls per person at 3.0 incoming calls per resident.</li> <li>• All agencies are a part of Hosted VIPER solution for 911 calls.</li> <li>• In sum, telephone-related workloads in the Butte County PSAPs can be different by a magnitude of over 2.5x, reflecting a variety of factors impacting telephone call volume for each PSAP.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognition that telephone-related workload varies considerably among PSAPs is important in considering consolidation efforts.</li> <li>• Data reflect that PSAPs handle different kinds of telephone calls, for different lengths of time, from a variety of different external or internal sources.</li> <li>• Because of the different ways agencies process telephone calls, this complicates consolidation efforts.</li> <li>• Importantly, different approaches to managing telephone calls can significantly impact potential cost allocation models in a consolidated center as telephone calls can be one important variable in cost allocation approaches.</li> </ul>
<b>From Call Receipt to Dispatch</b>	<ul style="list-style-type: none"> <li>• Similar to the above, the average time from call-receipt to dispatch varies among the agencies.</li> <li>• Chico has the shortest average call-receipt to dispatch at 3.3 minutes, closely followed by Gridley at 3.4.</li> <li>• Paradise has the lengthiest average call-receipt to dispatch at 6.7 minutes.</li> </ul>	<ul style="list-style-type: none"> <li>• Call-receipt to dispatch metrics not only reflect different priorities of telephone calls incoming but also different philosophical approaches to handling the reporting party. In sum, many factors influence how long a dispatcher/call-taker is occupied on a telephone call.</li> <li>• The different philosophies of handling call-taking can have an influence on successfully consolidating PSAPs.</li> </ul>
<b>Radio Transactions</b>	<ul style="list-style-type: none"> <li>• Radio transaction data was not available for all PSAP agencies.</li> </ul>	<ul style="list-style-type: none"> <li>• Radio transaction data is used in dispatcher staff modeling and as such will have to be estimated, if not available, based on other information.</li> </ul>

<b>Topic</b>	<b>Operational and Organizational Issues</b>	<b>Why is this topic an Issue?</b>
<b>Ancillary Duties</b>	<ul style="list-style-type: none"><li>• As noted earlier, ancillary duties performed by PSAP dispatchers vary widely from agency to agency.</li><li>• The Profile document has stipulated most of these differences, indicating how dispatch staff are used in ancillary roles for each PSAP.</li></ul>	<ul style="list-style-type: none"><li>• Ancillary duties assigned to dispatcher would, in large part, have to be reallocated to other staff in consolidation alternatives. As such, potential cost savings associated with consolidation can be offset to some degree due to the possibility of hiring additional administrative/clerical support to perform duties previously accomplished by generalist dispatchers.</li></ul>

Key Issues by Area: PSAP Operational Considerations		
Topic	Operational and Organizational Issues	Why is this topic an Issue?
<b>Work Schedules</b>	<ul style="list-style-type: none"> <li>Butte County PSAPs operate on different work schedules (shifts) using 10-hour, 12-hour and 12.5 hour scheduling approaches.</li> <li>12-hour shifts also contain different days-on / days –off approaches, such as a seven day schedule versus a 14-day schedule.</li> <li>The two largest PSAPs are on different shift schedules (Chico and BCSO).</li> </ul>	<ul style="list-style-type: none"> <li>PSAPs devise work schedules based on a variety of factors, including coverage during peak workload volumes, negotiated terms, staffing requirements, etc.</li> <li>The PSAPs in Butte County use a variety of shift schedules creating additional challenges to consolidation.</li> </ul>
<b>Compensation</b>	<ul style="list-style-type: none"> <li>Salary compensation, in many instances, is relatively close for several PSAPs (within approximately 5%).</li> <li>There is, however, one PSAP that pay approximately \$750 per month lower, at the highest step, compared to its most generous Butte County PSAP colleague.</li> </ul>	<ul style="list-style-type: none"> <li>Leveling salary and benefit structures is one of the more challenging aspects to consolidation, particularly if there are wide variations in compensation packages.</li> </ul>
<b>Facilities</b>	<ul style="list-style-type: none"> <li>There are only two PSAP facilities presently that would have potential to house a consolidated operation—BCSO and Chico.</li> <li>These facilities each have their own challenges that would need to be overcome in a fully regionalized consolidated center.</li> <li>Ideally, a new dispatch facility would need to be constructed to house a fully regionalized dispatch center.</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition costs associated with regionalized PSAPs can often be considered cost prohibitive and thus impact the ability to cost-effectively consolidate in the short to mid-term.</li> </ul>

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<b>Training</b>	<ul style="list-style-type: none"> <li>• Training protocols in the Butte County PSAPs differ, in some instances significantly.</li> <li>• Some dispatch staff are cross-trained in multiple protocols, including fire and law enforcement dispatch services.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring common training among a consolidated dispatch operation is an impediment, but is surmountable over time.</li> <li>• The more complicated issue is related to multi-trained dispatchers potentially moving to a PSAP environment that no longer requires multiple disciplines (e.g. both law and fire), or alternately, training incoming dispatchers for multiple disciplines if the PSAP environment requires this.</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>• As referenced in both this issues list and the profile, Butte County PSAPs employ different technology systems such as CAD, VLS, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconciling technology differences, particularly if such systems are relatively new or not at the end of their useful life, is problematic and often one of the greatest impediments to full consolidation efforts.</li> </ul>