



Audit of
Consolidated Dispatch Costs at
Broward Sheriff's Office

Office of the County Auditor

Audit Report

Robert Melton, CPA, CIA, CFE, CIG
County Auditor

Audit Conducted by:
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Report No. 19-06
February 6, 2019



OFFICE OF THE COUNTY AUDITOR

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February 6, 2019

Honorable Mayor and Board of County Commissioners

At the request of the Board of County Commissioners, we conducted a review of the consolidated dispatch costs at the Broward County Sheriff's Office. The objectives of our review were to determine whether amounts charged to the County are actual costs incurred and to determine whether staffing levels are reasonable.

We conclude that amounts charged to the County are actual costs incurred. We conclude that staffing levels are reasonable, except as discussed in our report. Opportunities for improvement are included in the report.

We appreciate the cooperation and assistance provided by the Broward Sheriff's Office throughout our review process.

Respectfully submitted,

A handwritten signature in blue ink that reads "Bob Melton".

Bob Melton
County Auditor

cc: Bertha Henry, County Administrator
Andrew Meyers, County Attorney
Gregory Tony, Sheriff, Broward County Sheriff's Office
Tracy Jackson, Director, Regional Emergency Services & Communications
Brett Bayag, Assistant Director, Regional Emergency Services & Communications

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INTRODUCTION

Scope and Methodology

The County Auditor's Office conducts audits of Broward County's entities, programs, activities, and contractors to provide the Board of County Commissioners, Broward County's residents, County management, and other stakeholders unbiased, timely, and relevant information for use in promoting government accountability and stewardship and improving government operations.

We conducted an audit of the consolidated dispatch costs at Broward Sheriff's Office. The objectives of our review were to determine whether:

1. Amounts charged to the County are actual costs incurred
2. Staffing levels are reasonable
3. Any opportunities for improvement exist

To determine whether amounts charged to the County are actual costs incurred, we identified accounts that comprised actual expenses, we obtained regular salaries, overtime, tax, retirement, and insurance amounts and selected samples of employees for review to validate reported amounts. We calculated the cost and evaluated the validity of training, teletype and qualitative analysis services, and we verified amounts remitted to the County for accuracy.

To determine whether staffing levels are reasonable, we calculated annual net available working hours and calculated required staffing levels given current operations. We reviewed consultant reports, identified recommendations with potential cost impacts on the accounts that comprised actual expenses, and calculated potential cost savings.

We conducted this audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our audit included such tests of records and other auditing procedures, as we considered necessary in the circumstances. The audit period was October 1, 2016 through March 31, 2018. However, transactions, processes, and situations reviewed were not limited by the audit period.

Overall Conclusion

We conclude that amounts charged to the County are actual costs incurred. We conclude that staffing levels are reasonable, except as noted in our report. Opportunities for improvement are included in the report.

Background

Effective October 1, 2013, an agreement was established between Broward County and the Broward Sheriff's Office ("BSO") for the operation of call-taking, teletype queries and dispatch services for the Consolidated Regional E911 Communications System ("System") to address the inefficiencies and costs of the fragmented dispatch system in existence at that time requiring the transfer of calls among numerous dispatch centers.

The agreement established the Sheriff's duties and responsibilities for the day-to-day operations of the System, the System's Public Safety Answering Point ("PSAP") locations, transition of PSAP employees to the Sheriff, the hiring, training, supervision, and discipline of personnel, and the responsibility to achieve performance benchmarks. The County is responsible for the overall management, administration and oversight relating to both the creation and operation of the System. The Office of Regional Communications and Technology ("ORCAT") has been delegated the responsibility for the regional public safety communications infrastructure, public safety applications, and the System including the management, administration and oversight of the program. BSO's Regional Communications Division is responsible for fielding emergency and non-emergency calls for police, fire, and medical services within Broward County.



BSO's Regional Communications Division Operations

The Regional Communications Division operates 24 hours a day, seven days a week, from three PSAPs, geographically located in the north (Coconut Creek), central (Sunrise), and south (Pembroke Pines) areas of the county, with specific station alerting and dispatching responsibilities assigned to each PSAP. The Division provides 9-1-1 and non-emergency call intake, teletype and dispatch services for all unincorporated areas of

Broward County, 29 law enforcement municipalities, 28 fire rescue municipalities and numerous special patrol areas including the Fort Lauderdale-Hollywood International Airport, Port Everglades, BSO's Department of Detention, Court Services and other areas.

The Division is organized into the following units:

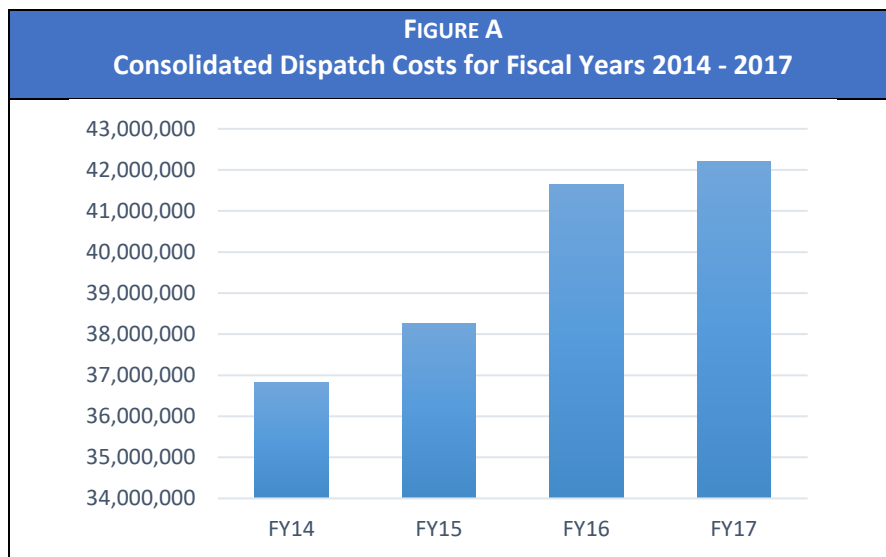
- ❖ E9-1-1 Telecommunicators provide emergency medical dispatch (“EMD”) services as a first responder for all medical calls for service and are trained to relay important medical instructions to County residents and visitors in life-threatening situations.
- ❖ Teletype Units at the regional dispatch sites operate links to state and federal databases and process information requests by deputy sheriffs and police officers. Typically, these inquiries seek information regarding missing or wanted persons, lost or stolen automobile tags, stolen vehicles, stolen articles and driver's license statuses.
- ❖ The Audio Evidence Unit is responsible for maintaining, redacting and distributing all audio recordings of police and fire rescue communications, including radio recordings, 9-1-1 and non-emergency telephone requests.
- ❖ The Training Unit is responsible for conducting the communications training academy, a twelve-week course mandated for all newly hired public safety telecommunicators, as well as on going quarterly continuing education training for all telecommunicators.
- ❖ The Medical Quality Assurance Unit is responsible for maintaining compliance with national standards. Through specialized training and development, their focus is random quality assurance reviews on 3% of the divisional medical call volume.
- ❖ The Quality Assurance Unit reviews randomly selected 9-1-1 calls, non-emergency calls and dispatched events with every telecommunicator monthly. The Quality Assurance Unit works in tandem with the Training Unit and the Medical Quality Assurance Unit by identifying trending topics and providing guidance to telecommunicators.

The standard employee work period is forty (40) work hours in a seven (7) consecutive day period, starting at 12:01am Saturday and ending at 12:00am Friday. There are currently three shifts per 24 hours:

1. Alpha 11:00pm – 7:00am;
2. Bravo 7:00am – 3:00pm; and
3. Charlie 3:00pm – 11:00pm

Consolidated Dispatch Costs

The County agreed, in the interest of public health, safety and welfare, to fund 100% of the cost of the System, and has the responsibility for the management, administration, and oversight relating to the creation and operation of the System. The cost is based on work performed and is primarily the cost for 447 budgeted personnel positions involved in providing dispatch services which amounted to approximately \$42.2 million in FY 2017. The annual budget includes all personnel services (salaries and fringe benefits) and all operating expenses for System services. Consolidated Dispatch employed approximately 417 employees (including administrative staff) in FY 2017. Figure A shows the Cost of Consolidated Dispatch Services for fiscal years 2014 through 2017. Annual costs have increased by approximately 15% since FY 2014.



Prepared by Office of the County Auditor based on Broward County Adopted Operating Budgets and FY 2017 cost data received from BSO

Scheduling & Time Reporting

In order to track personnel costs, the Division uses the Workforce TeleStaff (“TeleStaff”) application to build employee schedules. TeleStaff is a pre-programmed scheduling tool that creates daily employee schedules based upon available coverage, and allows for the recognition of staff shortages, prompting overtime. Schedules are predetermined and posted on TeleStaff. These shifts are reflected as;

- ❖ Regular Duty - the shift each employee is scheduled to work,
- ❖ Sign up Overtime - the shift the employee has signed up to work overtime,
- ❖ Mandated Overtime - shifts the employee is mandated to work overtime,
- ❖ Overtime (Alpha, Bravo or Charlie) - Overtime worked,

- ❖ Leave Requests - all leave requests, both approved and denied,
- ❖ Time Swaps, and
- ❖ Mandatory Overtime Credit – temporary exemption from mandatory overtime when an employee has worked 16 hours of overtime or more in one pay period.

TeleStaff shift schedules are the basis for employee payroll. Employees are paid according to schedule unless a schedule exception is entered into BSO's payroll system ("PeopleSoft"). The TeleStaff system is also utilized for the request, review, and approval of leave. There is no automated interface between the currently used version of TeleStaff and PeopleSoft, so employee schedule and leave information (Sick, Vacation, Jury Duty, etc.) is manually entered into the PeopleSoft system. If no leave is documented, the employee is paid for hours scheduled.

Overtime

The TeleStaff system generates a report that demonstrates the demand for labor in upcoming periods. From this report, the scheduling section creates a staffing plan. Any hours expressed on this report in excess of 40 per week per available dispatcher is automatically deemed mandatory overtime. The scheduling section allows employees to bid for the overtime, this is then demonstrated on their TeleStaff schedule as pre-scheduled mandatory overtime. If there are still hours remaining, employees are invited to sign up for additional overtime hours; any remaining hours is left as mandatory overtime and all employees are placed in a rotating pool for selection for mandatory overtime.

Pursuant to Section 4.5.2 of the Sheriff's Policy Manual, overtime is accrued in excess of 40 "hours worked" and paid at a rate of time and one half. Hours worked include;

- ❖ Annual leave
- ❖ Holidays
- ❖ Compensatory time
- ❖ Bonus days
- ❖ Jury duty
- ❖ Court appearances pertaining to BSO
- ❖ Compensation Time
- ❖ Time Swaps

Overtime is logged on the Overtime/Comp Time Authorization Form ("Authorization Form") and must be signed by the employee, approved by the employee's supervisor and one of the

department Heads, usually the Director or the Assistant Director before it is submitted for manual entry into PeopleSoft. Documentation supporting leave and overtime hours is decentralized, maintained within the respective employee's unit.

Employees with overtime hours can elect one of the following options:

1. Get paid overtime at the end of the payroll period.
2. Accrue compensatory time for later use. For example, for every hour of overtime, the employee accrues time and one-half hours of leave.

Employee Training

Newly hired staff are required to undergo approximately 12 weeks (480 hours) of training academy instruction followed by another 12 weeks (480 hours) sitting alongside experienced Communication Training Officers ("CTO") for further on-the-job-training to learn call taking and dispatch duties. It takes approximately 6 months from the date of hire to the first solo assignment.

To maintain EMD certification, employees are required to receive 24 hours of continuing education training every two years. This is in addition to eight hours of annual continuing education training relevant to Consolidated Dispatch. This results in an average of 20 hours of training and continuing education annually $[(24 \text{ hours}/2) + 8 \text{ hours} = 20 \text{ hours annually}]$.

Training is provided in-house by the Training staff and some training is self-study. Training hours for each employee is tracked by the Training group and evidence of completed training is provided to the certification agency every two years.

Qualitative Assurance and Quality Improvement

The Quality Assurance Unit handles all non-EMD related calls, such as Emergency Police Dispatch, Emergency Fire Dispatch, and teletype, while the Medical Quality Assurance Unit handles all EMD related calls. Both units have 9 employees each (eight staff and one supervisor). QA personnel are expected to evaluate the calls for compliance with standard operating procedures. QA staff complete evaluation forms to document reviews and meet with floor operators to discuss results. The QA process is not conducted on live calls. All incoming calls and dispatch activities are automatically recorded and documented.

Monthly, QA personnel are required to work a minimum of 16 hours as E911 or Dispatch operators to maintain proficiency so that they can remain up-to-date and available for emergency situations.

On June 5, 2018, the County entered into an agreement with Replay Systems, Inc. ("Replay") for the Voice Recording System Hardware Refresh, the Command Center System (Dashboards, etc.), Independent Quality Assurance and Quality Improvement Evaluation Services (QA/QI Services), and Maintenance/Support Services, for an initial term of two years and five months in the not-to-exceed amount of \$2,276,000. The agreement includes three one-year renewal options for Independent Quality Assurance and Quality Improvement Evaluation Services (QA/QI Services) at \$648,000 per year for a total of \$1,944,000, plus three one-year renewal options for support and maintenance services for the Voice Recording System and the Command Center System at \$385,000 per year, for a total of \$1,155,000. The Agreement also includes \$1,200,000 for optional services to cover enhancements and upgrades of the Voice Recording System, Command Center, NICE Recording System Software enhancements, and potential changes associated with Next Generation 911, and \$250,000 for any moves, adds and changes to the Voice Recording System or Command Center for the duration of the Agreement, inclusive of renewal terms. The agreement authorizes the Director of Purchasing to renew this Agreement for the three referenced optional one-year renewal periods for a total not-to-exceed agreement amount of \$6,825,000.

FITCH & Associates, LLC

ORCAT contracted with the consultant firm, FITCH & Associates, LLC ("FITCH") in early 2016 to assess the System. As an overall goal, FITCH was initially tasked with assessing the System through data collection and baseline assessments, external benchmarking, and definition of future state options, as well as to evaluate the System against industry best practices and opine on the pertinence and attainment of previously established goals. The assessment resulted in 21 specific recommendations for improvement to the System.

OPPORTUNITIES FOR IMPROVEMENT

Our review disclosed certain policies, procedures and practices that could be improved. Our review was neither designed nor intended to be a detailed study of every relevant system, procedure or transaction. Accordingly, the Opportunities for Improvement presented in this report may not be all-inclusive of areas where improvement may be needed. Additional potential concerns considered during our audit are included in Appendix A. Management's response is included in Appendix B.

1. Management Should Implement FITCH's Recommendations to Improve the Efficiency and Effectiveness of Operations.

Recommendations made by FITCH have not yet been fully implemented. FITCH made 21 recommendations which they indicate, if implemented, would result in increased efficiencies that would allow a reduction in staffing for call intake and radio positions between 9.7% and 11.1% with no layoffs required to achieve this goal. FITCH's recommendations include the following:

- ❖ Filling vacant positions in a timely manner, alternate work schedules and longer shifts.
- ❖ Changing the ratio of Supervisors to dispatch personnel from 1:10 to 1:6.
- ❖ Adjusting call processing staffing to achieve initial call-taking performance of between three to five seconds at the 90th percentile.
- ❖ Consolidating law enforcement and fire radio positions to increase efficiency.

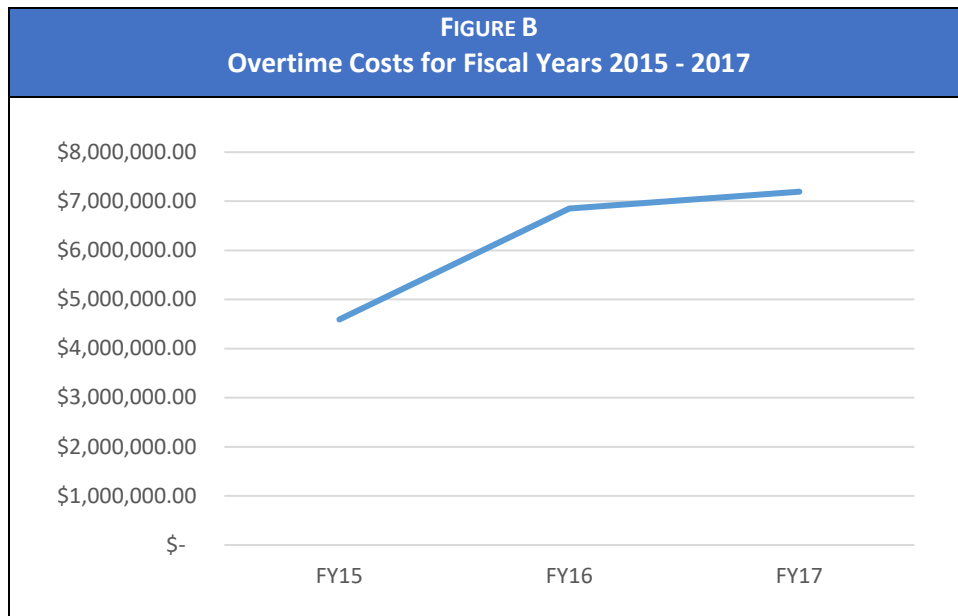
Implementing FITCH's recommendations and arriving at the recommended staffing levels may result in savings of approximately \$631,000 annually. Broward Sheriff's Office indicated that hiring and training challenges may preclude timely implementation.

We recommend County management work with the Broward Sheriff's Office to determine appropriate staffing levels based upon the phased implementation of FITCH's recommendations and ensure appropriate programs and procedures are in place to acquire and maintain adequate staffing levels.

2. Staffing Levels Should be Adjusted to Reduce Overtime Costs.

Consolidated Dispatch has 447 budgeted personnel positions; however, only an average of 417 positions (including administrative staff) were filled during FY 2017. We noted that overtime costs are approximately 15% of overall operational costs and was, by comparison, approximately

26% of the amount paid for regular salaries in FY 2017. Figure B shows the overtime costs from FY 2015 to FY 2017.



Prepared by Office of the County Auditor based on cost data received from BSO

Overtime is paid at a premium rate (1 ½ times regular rate). The excess monies paid over regular rate was \$1.8 million which represents approximately 35 additional full-time equivalents (“FTE”). Filling currently budgeted positions may result in annual savings of approximately \$260,000 after new employees receive all required training.

We recommend County management work with the Broward Sheriff's Office to ensure appropriate programs and procedures are in place to hire and maintain adequate staffing levels. Adequate staffing levels should be considered in conjunction with the phased implementation of FITCH's recommendations.

3. Timekeeping Technology and Procedures Should be Updated to Improve Efficiency and Accuracy of Payroll Processes and Ensure Compliance.

During our review of timekeeping and payroll procedures, we noted the version of the TeleStaff scheduling system currently used by BSO does not electronically transmit employee schedule exception hours to the PeopleSoft payroll system. As a result, payroll exceptions including overtime and paid absences are manually entered reducing efficiency and accuracy. Specifically, we noted the following concerns:

- A. The time currently spent to manually input payroll exception data into the PeopleSoft payroll system is excessive. Employees are paid according to their schedule in TeleStaff,

and any exception to scheduled hours must be recorded to ensure accurate payroll. According to management, approximately 70 hours are spent every two weeks (1,820 hours annually or 1.12 full time employees) to manually input payroll exception data.

- B. Procedures are not adequate to ensure data from the TeleStaff system matches PeopleSoft. For two of 58 (3%) employees reviewed, hours manually entered into the PeopleSoft payroll system did not agree with hours worked in the TeleStaff system. Payroll information from TeleStaff should agree to the information manually entered in the PeopleSoft system. Failure to ensure accurate hours are entered in PeopleSoft could result in overpayments or underpayments to employees.

We recommend County management work with the Broward Sheriff's Office to:

- A. Upgrade the TeleStaff system or purchase other scheduling software compatible with the PeopleSoft payroll system to automate the transfer of payroll schedule and exception data.
- B. Enhance current procedures to validate the accuracy of data transferred from the TeleStaff system to PeopleSoft.

4. Changes to Quality Assurance Services may Improve Compliance with Industry Standards but Increase Cost.

During our review of qualitative analysis services, we noted the following concerns:

- A. County Administration has implemented an agreement with Replay Systems, Inc. (Replay) for independent quality assurance and quality improvement (QA/QI services) for approximately \$648,000 annually; however, these services are currently performed by BSO's qualitative assurance personnel and there is a lack of clarity between BSO and County as to how these additional services may be integrated or how it may affect the current staffing plan within BSO. A lack of clarity on the implementation of this agreement may result in increased operational inefficiencies, costs, and organizational uncertainty. A transition plan should be documented and communicated to adjust job responsibilities of some existing QA personnel to QA responsibilities not covered under the Replay agreement and reassign some existing QA personnel to other operational functions within Consolidated Dispatch. Since there is no expectation of staff reductions as a result of this agreement, the cost of this contract will be in addition to current costs unless proposed savings from the implementation of Fitch's recommendations offsets this amount.

- B. The volume of non-emergency medical dispatch (Non-EMD) calls reviewed by the QA Unit is approximately 0.22% which is significantly below the industry standard of 2%. Failure to review an adequate number of non-EMD calls may result in lack of compliance with standard operating procedures and may allow noncompliance to remain undetected. Management should apply industry standards, where applicable, when assessing performance and address areas needing improvement in a timely manner. The implementation of the Replay agreement, as described in A. above, is expected to increase the volume of non-EMD calls reviewed.

We recommend County Management Work with the Broward Sheriff's Office to:

- A. Clarify the plan to implement the Replay agreement, including the reallocation of existing QA resources and any savings based on Fitch's recommendations.
- B. Ensure industry QA standards are met for non-EMD calls.

APPENDIX A

Additional Potential Concerns Considered During our Audit

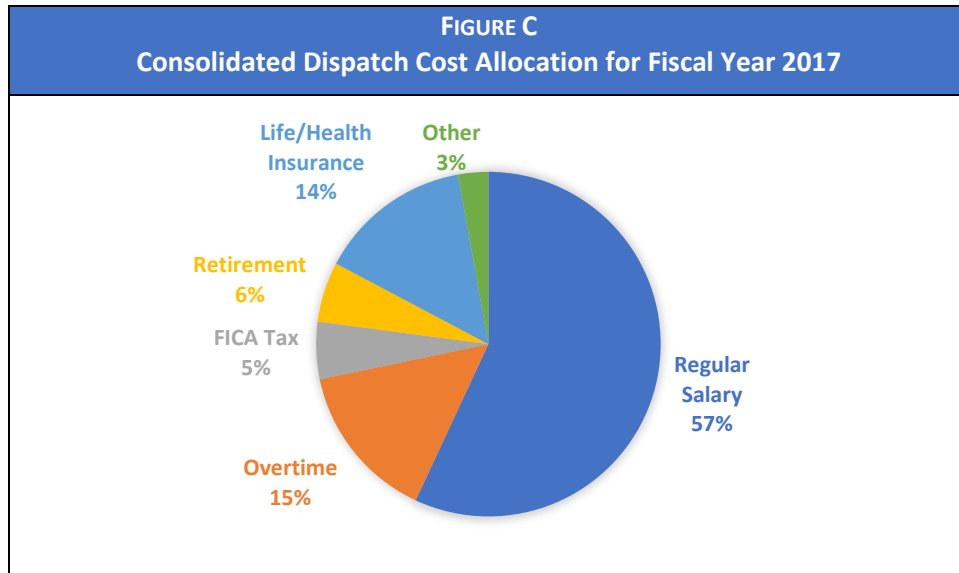
As we initiated this audit, County Administration expressed several potential concerns and questions regarding Consolidated Dispatch costs. During our fieldwork, we obtained information and/or performed analyses which provided answers and/or additional insights regarding these topics. The narrative below provides a listing of these concerns, a summary of any conclusions reached based upon our observations, and cross references to sections of this report which may address the issues in more detail or provide related recommendations for improvement.

A. Are Expenditures Paid for by the County Actual Costs for Consolidated Dispatch?

Expenditures paid by the County represent actual costs incurred by Consolidated Dispatch. The budget and expenditures for Consolidated Dispatch are accounted for exclusively in a separate fund. We obtained the actual cost reports for the fund for the 12 months ended September 30, 2017 and 6 months ended March 31, 2018. We reviewed cost information for fiscal year 2017 and determined that approximately 97% (\$41 million) of the actual cost of Consolidated Dispatch was accounted for by the following items in FY 2017 and the first six months of FY 2018. Table 1 shows the accounts that represent 97% of consolidated dispatch costs.

| Account | FY 17 | FY 18 |
|-----------------------|----------------------|----------------------|
| Regular Salary | \$ 24,030,827 | \$ 11,236,851 |
| Overtime | \$ 6,242,312 | \$ 2,507,785 |
| FICA taxes | \$ 2,268,768 | \$ 1,011,194 |
| Retire/regular | \$ 2,381,710 | \$ 1,120,268 |
| Life/health insurance | \$ 6,091,736 | \$ 2,813,452 |
| Total | \$ 41,015,355 | \$ 18,689,552 |

Figure C shows the allocation of consolidated dispatch costs in FY 2017.



Prepared by Office of the County Auditor based on FY 2017 cost data received from BSO

We performed procedures to validate on a test basis that employee expenses were attributable to Consolidated Dispatch and that the amounts were supported. We noted no exceptions.

B. Are Net Available Working Hours Reported by BSO too low?

Net Available Work Hours (NAWH) calculated during our review is greater than the amount reported by BSO. We reviewed BSO's and FITCH's calculations of NAWH in FY 2014. We then performed an independent calculation based on actual compensation reports for FY 2017, separating average employee hours for all Consolidated Dispatch personnel into the following categories:

- ❖ FMLA, Military Leave
- ❖ Personal, Vacation & holiday
- ❖ Regular and Training
- ❖ Sick leave

We calculated a total of 130 hours associated with the two mandatory 15-minute breaks, estimated 80 hours of continuing education which includes 20 hours of mandatory training annually based on management's representations, and removed overtime hours. Our calculation of NAWH was higher than BSO's but less than FITCH's. We conclude that BSO's calculation of NAWH is too low. A low NAWH may affect staffing and budgeting decisions. Table 2 shows NAWH Calculations for BSO & FITCH FY 2014 and the County Auditor for FY 2017.

| TABLE 2 Net Available Work Hours Calculations for BSO & FITCH FY 2014 and County Auditor FY 2017 | | | |
|---|----------------|------------------|--|
| Description | BSO FY 2014 | FITCH FY 2014 | County Auditor FY 2017 <i>(Note 1)</i> |
| Total Hours | 2080 | 2080 | 2080 |
| Less Personal, Vacation, and Holiday Leave | (213) | (213) | (247) |
| Less Sick Leave | (94) | (94) | (84) |
| Less Military, FMLA Leave, etc. | (39) | (39) | (36) |
| Less Lunch and Break | (264) | | (130) |
| Less Other | (3) | (3) | |
| Less Training | (86) | (86) | (80) |
| Net Available Work Hours | 1381 | 1645 | 1503 |

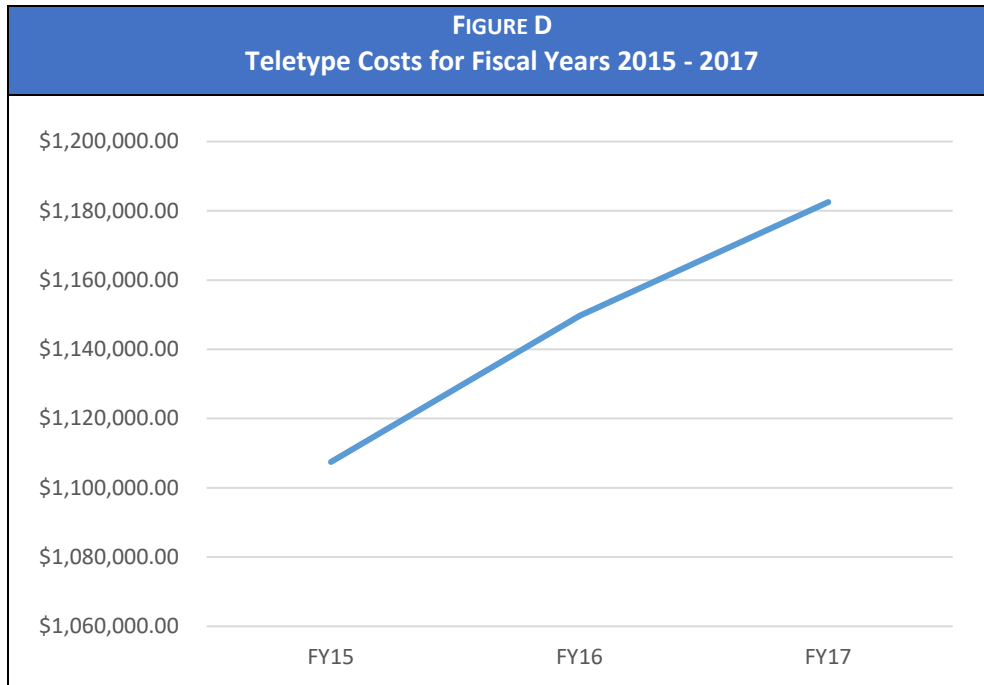
FY 2014 information copied from FITCH report and FY 2017 information prepared by Office of the County Auditor based cost data received from BSO.

Note: Calculations do not include training provided to new hires, FY 2017 one-time system upgrade training, and unpaid ½ hour lunch per shift.

C. Is the Teletype Function Providing More Than Contractually Required Services Thereby Increasing Cost?

We were unable to determine whether the teletype function provides more than the contractually required services. Our staff was prohibited from listening to law enforcement inquiries to the Teletype Unit as special Florida Department of Law Enforcement (“FDLE”) training is required to understand coded communications; however, we reviewed teletype logs, contracts, operations, and costs.

The cost of teletype services is only indirectly related to the number and duration of inquiries. The cost is directly tied to the cost of personnel to fill three teletype seats that are manned 24 hours each day at a cost of approximately \$1.2 million annually representing 3% of the overall cost of Consolidated Dispatch. Figure D shows the teletype costs from FY 2015 to FY 2017.



Prepared by Office of the County Auditor based on cost data received from BSO

According to Section 1.24 of the Agreement between Broward County and Sheriff of Broward County, Florida for the Operation of Call Taking, Teletype (Queries Only) and Dispatch Services for the Consolidated Regional E-911 Communications System (Agreement):

"The term "Teletype Query(ies)" or "Teletype (queries only)" shall mean a query search for information performed by a teletype operator that may utilize the Criminal Justice Network ("CJNET") to access a specific database for law enforcement purposes specific to confirmations and locates utilizing the procedures set forth on "Exhibit "G." Databases requiring access to perform a Teletype Query may include, but are not limited to, Florida Crime Information Center ("FCIC"), National Crime Information Center ("NCIC") and Driver and Vehicle Information Database ("DAVID").

Teletype activities, such as, but not limited to, the entries, deletions, updates and validations, as required by Florida Department of Law Enforcement ("FDLE"), shall remain the responsibility of Participating Community and shall not be a part of System Services and System Services shall be limited to Teletype (queries only)."

The teletype query process is handled entirely by BSO. Participating Communities are responsible for performing and funding their own confirmations and locates and those teletype activities, such as, but not limited to, the entries, deletions, updates and validations, as required by Florida Department of Law Enforcement ("FDLE"), shall remain the responsibility of

Participating Community and shall not be a part of consolidated dispatch services. Figure E shows the teletype query process flow.

FIGURE E
Teletype Query Process Flow

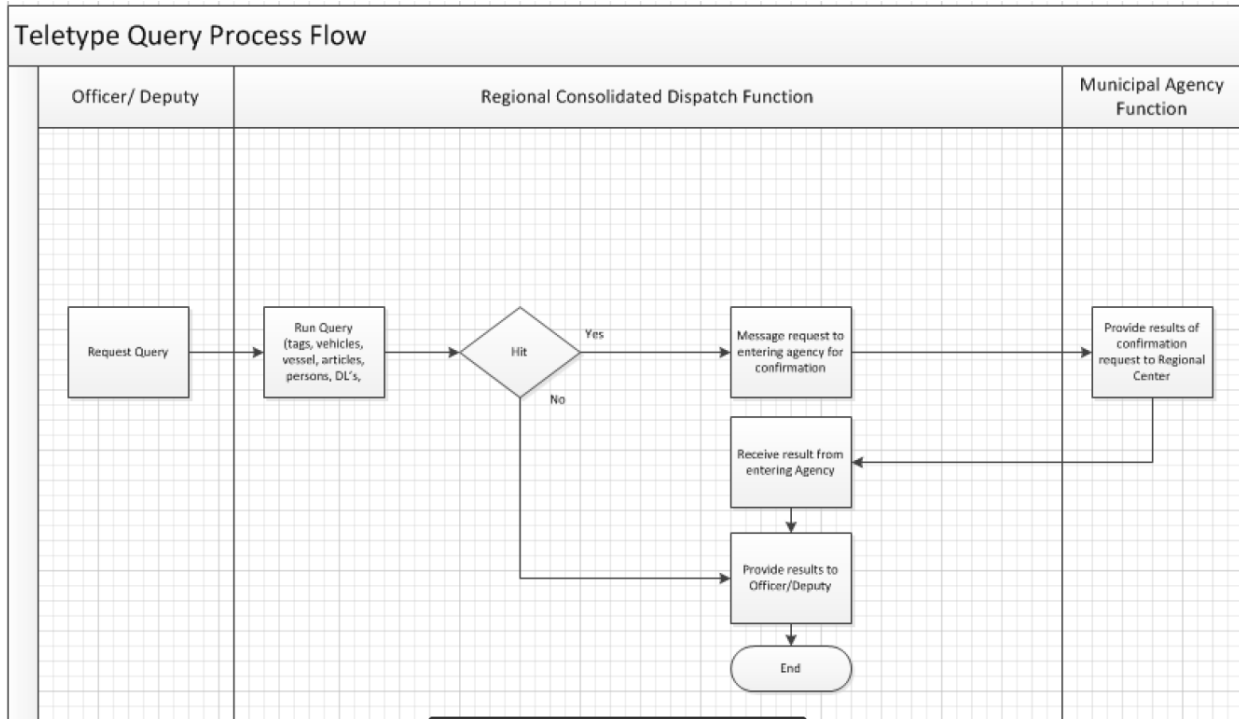


Exhibit G from "Agreement between Broward County and Sheriff of Broward County, Florida for The Operation of Call-Taking, Teletype (Queries Only) and Dispatch Services for the Consolidated Regional E-911 Communications System.

APPENDIX B – Management's Response



BERTHA W. HENRY, County Administrator
115 S. Andrews Avenue, Room 409 • Fort Lauderdale, Florida 33301 • 954-357-7362 • FAX 954-357-7360

MEMORANDUM

DATE: February 1, 2019
TO: Bob Melton, County Auditor
FROM: Bertha W. Henry, County Administrator
SUBJECT: Response to County Auditor's Review of Consolidated Dispatch

We have reviewed the above-referenced County Auditor's Report. The report suggests that current staffing levels are sufficient to perform the services and further savings could be achieved. The following is Management's response to opportunities for improvement and recommendations which, to the extent possible, will require working with BSO for implementation.

Opportunity for Improvement 1: *Management Should Implement FITCH's Recommendations to Improve the Efficiency and Effectiveness of Operations.*

Recommendation:

County management work with the Broward Sheriff's Office to determine appropriate staffing levels based upon the phased implementation of FITCH's recommendations and ensure appropriate programs and procedures are in place to acquire and maintain adequate staffing levels.

Management's Response:

Agree. As recommended in reports issued by Fitch and Associates, initiatives are underway to improve the efficiency and effectiveness of operations for the Consolidated Dispatch System. Attached (Exhibit 1) is a status update on those initiatives. Along with implementing the recommendations from Fitch, attached (Exhibit 2) is a comparison of the calculation of the Net Available Work Hours (NAWH) from Fitch and County Auditors. By implementing the County Auditor's recommendation, there will be additional FTE position savings to the County in the amount of approximately 4.1%. Analysis conducted by Fitch and the County Auditor's Office indicate that Net Available Work Hours are higher than what is being calculated by BSO.

Bob Melton, County Auditor
Response to County Auditor's Review of Consolidated Dispatch
February 1, 2019

Opportunity for Improvement 2: *Staffing Levels Should be Adjusted to Reduce Overtime Costs.*

Recommendation:

County management work with the Broward Sheriff's Office to ensure appropriate programs and procedures are in place to hire and maintain adequate staffing levels. Adequate staffing levels should be considered in conjunction with the phased implementation of FITCH's recommendations.

Management's Response:

Agree. Appropriate staffing levels will be established in conjunction with the phased implementation of the FITCH recommendations.

Opportunity for Improvement 3: *Timekeeping Technology and Procedures Should be Updated to Improve Efficiency and Accuracy of Payroll Processes and Ensure Compliance.*

Recommendation:

County management work with the Broward Sheriff's Office to:

- A. Upgrade the TeleStaff system or purchase other scheduling software compatible with the PeopleSoft payroll system to automate the transfer of payroll schedule and exception data.*
- B. Enhance current procedures to validate the accuracy of data transferred from the TeleStaff system to PeopleSoft.*

Management's Response:

- A. Partially Agree. This is a BSO payroll system. The County will work with BSO to examine and evaluate the implementation of an automated software solution that establishes effective and accurate timekeeping technology.
- B. Agree. Management will work with the Broward Sheriff's Office to review current procedures to validate the accuracy of data transferred.

Opportunity for Improvement 4: *Changes to Quality Assurance Services may Improve Compliance with Industry Standards but Increase Cost.*

Recommendation:

County Management Work with the Broward Sheriff's Office to:

- A. Clarify the plan to implement the Replay agreement, including the reallocation of existing QA resources and any savings based on Fitch's recommendations.

Bob Melton, County Auditor
Response to County Auditor's Review of Consolidated Dispatch
February 1, 2019

B. Ensure industry QA standards are met for non-EMD calls.

Management's Response:

- A. Partially Agree. As part of the selection and development of the Quality Assurance/Improvement Program, the Broward Sheriff's Office has been involved in this program. The County believes roles and responsibilities to support this initiative have been established and continue its effort to assist BSO in implementation.
- B. Agree. County staff will be monitoring industry QA standards for all protocol (EMD, EFD, and EPD), and all non-protocol call types to ensure they are met. The number of evaluations completed under the Quality Assurance/Improvement Program is expected to exceed industry standards and will meet accreditation requirements for both the International Academy of Emergency Dispatch (IAED) and the Commissions on Accreditation for Law Enforcement Agencies (CALEA).

Please do not hesitate to contact my office if you have any questions or require additional information.

cc: Board of County Commissioners
Monica Cepero, Deputy County Administrator
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EXHIBIT 1

| Number | Recommendation | Current Status |
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| 1 | The County needs to insure the missions of technology development and technology sustainment have different focuses and roles. Therefore, the County should provide for a Technology Development Team and a Technology Sustainment Team over the next few years as new technologies are implemented, and the system continues to stabilize. | ONGOING: In the past two fiscal years, the County has added new ORCAT positions in support of continuous program improvement. County continues to assess ORCAT resources requirements annually to support best practices. |
| 2 | An absolute priority for the County is to develop a link between 911 phone records and the associated CAD incident records. | IN PROCESS: County has implemented the next generation CAD System, implemented version release upgrades to the 911 phone system (VIPER), established a replicated 911 call records database, and implemented a Universal Call Identifier (UCID), all prerequisites for this item. Two more tasks are pending: custom data query development and custom report development. |
| 3 | BSO should maintain EMD certification training for all call takers through the International Academies of Emergency Dispatch (IAED). Call taker personnel should also be trained and certified as Emergency Fire Dispatchers (EFD) and in the system, implement EFD in the near future. These certifications are considered industry best practice. | COMPLETE: In October 2018, Broward County Regional Communications successfully achieved EMD ACE accreditation. As of November 5, 2018, call takers began processing calls using the International Academies of Emergency Dispatch's Emergency Fire Dispatch (EFD) protocols. |
| 4 | Finally, law enforcement agencies should consider and evaluate the efficacy of Emergency Police Dispatch (EPD) being utilized in the future. This system is emerging as an industry best practice. | IN PROCESS: Emergency Police Dispatch (EPD) has been endorsed by the Broward Police Chiefs Association and County has allocated funds for the implementation of EPD. The county is currently working cooperatively with BSO and the Regional Stakeholders toward a launch of EPD in March 2019. |
| 5 | Operational Oversight and System Governance should be redefined to strengthen the role of end-users while balancing the logistical concerns of the Operator (BSO), and the financial and system governance responsibilities of Broward County. | COMPLETE: The Police and Fire Chiefs Associations have established an Operational Review Team (ORT) in support of the Engagement Process for issues related to field operational procedures and processes. |
| 6 | Alternative work schedules are available and should be considered. | PENDING: |

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| | | Filling vacant positions in a timely manner with the goal of maintaining full staffing will reduce excessive mandatory overtime and the associated stress. This will allow resources to align more closely to demand patterns, thereby improving efficiency in the system |
| 7 | Supervision on the PSAP dispatch floors should be at a ratio of six to one as opposed to the current ten to one ratio. Greater quality assurance processes are to be handled by BSO dispatch floor supervisors. | IN PROCESS: County allocated FY18 Budget funding to provide a 6:1 supervision ratio for call intake staff and will allocate the same for call dispatch staff within the next two years as dispatch consolidation initiatives are implemented. |
| 8 | Resources for dispatcher training should be increased through reallocation of current funding. | IN PROCESS: County allocated FY18 Budget funding of \$2.5M in support of dispatcher and call taker training. County will continue to assess training needs through quality assurance initiatives and evaluate resource requirements for additional dispatcher and call taker training as technologies and emergency call processing procedures are implemented and as quality assurance reviews specify. |
| 9 | A "base level of 911 services" funded by the County should be more clearly defined by utilizing the current interlocal agreements and <i>FITCH's</i> modelling of performance levels as noted in call taking and radio positions. Individual agencies desiring higher levels of service should be able to fund additional staffing hours or technology in order to receive services specific to their jurisdictional needs. County should facilitate these additional services as long as they do not disrupt the base services. | IN PROCESS: The <i>FITCH</i> Phase 3 Report provided the "base level" operational targets for both law and fire radio dispatch positions. Call-taker position operational targets were provided in the <i>FITCH</i> Phase 2 Report. Combined, these recommendations represent the base levels of service for 911 services. Amendments to the Agreement for Participation in the Consolidated Regional E-911 Communications System with municipalities are in process, which include a provision to permit municipalities to procure special municipal services above the base levels of service. |
| 10 | The County should modify the current monthly performance report format and replace it with a monthly report that focuses solely on data and provides no commentary. | COMPLETE: County has fully implemented this recommendation. |
| 11 | The "busy hour" is to be redefined in a prospective manner based on historical data and is to be reassessed in no less than 12-month intervals. These changes allow for meaningful and actionable | COMPLETE: County has fully implemented this recommendation. |

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| | information exchanges and provide user agencies with a needed level of oversight. | |
| 12 | The County should purchase a performance measurement software package that will provide agencies with ready access to the activities and performance of their respective field units, and simultaneously allow the County and BSO to evaluate system performance at the micro and macro levels. | <p>COMPLETE: As part of the implementation of the next generation CAD system, County implemented the Report Data Warehouse (RDW) for agencies to access the activities and performance of their respective field units, and to allow stakeholders to evaluate system performance at the micro and macro levels. Standardized reports were collaboratively developed with stakeholders, and the RDW provides for highly parameterized ad-hoc reporting and dash boarding.</p> |
| 13 | Only the performance on emergency/911 incidents should be included in the performance reports. The current practice of evaluating duplicate 911 calls on a single incident skews measurement. The true structure of the report should be to present the numbers in a way that highlights the calls where response time is important. Some thought should be given to present response times starting with the call receipt to emergency service arrival on scene. This will give the proper presentation of the caller's experience. Special attention should be paid to high priority incidents. | <p>IN PROCESS: County has partially implemented this recommendation. Separate metrics are reported for higher priority (Delta & Echo) medical calls. Further custom report development is in progress.</p> |
| 14 | Regarding reporting performance for various call processing time intervals, once the technology issues are resolved, the P2 and P3 intervals should be reported separately and as a combined metric. The reasoning is that, particularly for fire and emergency medical Delta and Echo life-threatening calls, fast and effective dispatch performance contributes to positive outcomes. Monthly reports should also report P4 (turn-out times) for fire rescue incidents and P5 (travel time) for both fire rescue and law high priority incidents. | <p>COMPLETE: County has fully implemented this recommendation.</p> |

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| 15 | <p>In general, dispatch center performance metrics are to focus on optimizing dispatch processes as much as possible, with the end result being to get help moving to emergencies as quickly as possible. The primary objective is to contribute to the potential for positive outcomes for patients and properties.</p> | <p>COMPLETE: County revised the monthly performance report to align with the recommended Monthly Performance Report Format. County also allocated funds for the procurement and implementation of independent quality assurance assessments to routinely measure the system's capability regarding positive outcomes for patients and properties.</p> |
| 16 | <p>Call processing staffing should be adjusted to achieve P1/call-taking performance of between three to five seconds at the 90th percentile by adopting the recommended workstation functional reorganization as detailed in the report section titled, Dispatch Operations Models – Options. This adjustment, in conjunction with the already implemented single queue for call intake, provides significant efficiencies in the call taking process while maintaining high levels of performance.</p> | <p>IN PROCESS: BSO should continue to adjust call taker schedules to affect this metric in to achieve the recommended efficiencies.</p> |
| 17 | <p>Fire-rescue agencies should develop, approve and implement countywide nearest unit response protocols that apply irrespective of jurisdictional boundaries in those incidents involving high priority incidents (e.g. Delta & Echo level EMD calls).</p> | <p>IN PROCESS: County has drafted a comprehensive nearest unit response, or closest unit response (CUR) project charter in collaboration with the CUR Core Team. The CUR project charter will be circulated to fire agencies for signature in 4Q18. County is preparing a draft Regional Auto Aid Agreement based on a draft provided by Broward County Fire Chief's Association President. Both the CUR Project Charter and the Regional Auto Aid Agreements should be executed as prerequisites to CUR project implementation. It is planned to be a phased implementation, with the first phase currently targeted to begin in 3Q19.</p> |
| 18 | <p>Recommended process changes to radio channel usage include requiring increased usage of Mobile Data Terminals (MDTs) by field responders.</p> | <p>PENDING: FITCH Phase 3 report presented research on MDT best practices, which will be evaluated for implementation through the Engagement Process.</p> |

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| 19 | Once the CAD is upgraded to allow automatic computer assignment / recommendation of response units for fire/rescue calls, a single "gatekeeper" function / fire rescue alert channel can be implemented to manually approve the assignment consistent with <i>FITCH</i> Staffing Model Option 2. Upon dispatch, predefined tactical radio channels would be used for more routine fire incidents and EMS incidents. More significant incidents (structure fires, major/multiple unit responses) would be assigned a dedicated tactical channel. This change in fire rescue radio operations provides significant efficiencies while maintaining high levels of performance. | <p>IN PROCESS: Planning and coordination efforts are underway in collaboration with participating fire agencies for implementation of fire dispatch position consolidation, targeting implementation to begin in FY20. This will be a phased implementation of <i>FITCH</i> Option 1, then migrating to the fire rescue alert channel consistent with the <i>FITCH</i> Staffing Model Option 2.</p> |
| 20 | Law enforcement radio positions should be consolidated to increase efficiency consistent with Option 2. | <p>IN PROCESS: Planning and coordination efforts are underway in collaboration with participating law agencies for implementation of law dispatch position consolidation, targeting implementation to begin in FY20.</p> |
| 21 | Long-term capital budgeting programs should be considered as soon as practical to include two new purpose-specific 911 facilities. | <p>IN PROCESS: Broward County provided funding in the FY17 Capital Improvement Program for initial analysis and design specifications for a new purpose-built facility. Once the full cost details are developed, funds will be proposed as part of the capital budgeting program for the construction of a new facility</p> |

Fitch Option 1 - Determining Suggested FTE Staffing Fitch versus County Auditor

| | | Fitch | Auditor | FTE Variance |
|------------------------------------|---|--------|---------|-----------------|
| Determining FTE Call Intake | | | | |
| 1 | Determine the net available work hours (NAWH) | 1381 | 1503 | |
| 2 | Identify hours assigned to Lunch and Breaks | 264 | 130 | |
| 3 | Add the value of Lunch and Breaks back into NAWH | 1645 | 1633 | |
| 4 | Identify annual base Time on Task (workload in Erlangs) (Demand) | 109564 | 109564 | |
| 5 | Calculate Lunch and Break Allowance factor (see *Note: Lunch and Break Allowance Factor Calculations) | 0.125 | 0.0625 | |
| 6 | Increase base workload demand (Erlangs) to factor in Lunch and Breaks - (This determines Demand with Breaks) | 123260 | 116412 | |
| 7 | Divide annual adjusted workload hours by the NAWH (which had Lunch and Breaks added back in) (This determines FTEs) | 74.9 | 71.3 | (3.6) |
| 8 | Demand with Breaks Round up adjustment | 123760 | 116884 | |
| 9 | Suggested FTE Staffing (with Round up adjustment) | 75.2 | 71.6 | (3.7) |

| | | Fitch | Auditor | FTE Variance |
|----------------------------|---|--------|---------|-----------------|
| Determining FTE Law | | | | |
| 1 | Determine the net available work hours (NAWH) | 1381 | 1503 | |
| 2 | Identify hours assigned to Lunch and Breaks | 264 | 130 | |
| 3 | Add the value of Lunch and Breaks back into NAWH | 1645 | 1633 | |
| 4 | Identify annual base Time on Task (workload in Erlangs) (Demand) | 218400 | 218400 | |
| 5 | Calculate Lunch and Break Allowance factor (see *Note: Lunch and Break Allowance Factor Calculations) | 0.125 | 0.0625 | |
| 6 | Increase base workload demand (Erlangs) to factor in Lunch and Breaks - (This determines Demand with Breaks) | 245700 | 232050 | |
| 7 | Divide annual adjusted workload hours by the NAWH (which had Lunch and Breaks added back in) (This determines FTEs) | 149.4 | 142.1 | (7.3) |
| 8 | Demand with Breaks Round up adjustment | 247520 | 233769 | |
| 9 | Suggested FTE Staffing (with Round up adjustment) | 150.5 | 143.2 | (7.3) |

| | | Fitch | Auditor | FTE Variance |
|--------------------------------------|--|--------|---------|-----------------|
| Determining FTE Fire Option 1 | | | | |
| 1 | Determine the net available work hours (NAWH) | 1381 | 1503 | |
| 2 | Identify hours assigned to Lunch and Breaks | 264 | 130 | |
| 3 | Add the value of Lunch and Breaks back into NAWH | 1645 | 1633 | |
| 4 | Identify annual base Time on Task (workload in Erlangs) (Demand) | 119392 | 119392 | |
| 5 | Calculate Lunch and Break Allowance factor (see *Note: Lunch and Break Allowance Factor Calculations) | 0.125 | 0.0625 | |
| 6 | Increase base workload demand (Erlangs) to factor in Lunch and Breaks - (This determines Demand with Breaks) | 134316 | 126854 | |

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|---|---|--------|--------|-------|
| 7 | Divide annual adjusted workload hours by the NAWH (which had Lunch and Breaks added back in) (This determines FTEs) | 81.7 | 77.7 | (4.0) |
| 8 | Demand with Breaks Round up adjustment | 135044 | 127542 | |
| 9 | Suggested FTE Staffing (with Round up adjustment) | 82.1 | 78.1 | (4.0) |

| Determining FTE Supervisor Option 1 | | Fitch | Auditor | FTE Variance |
|-------------------------------------|---|-------|---------|-----------------|
| 1 | Determine the net available work hours (NAWH) | 1381 | 1503 | |
| 2 | Identify hours assigned to Lunch and Breaks | 264 | 130 | |
| 3 | Add the value of Lunch and Breaks back into NAWH | 1645 | 1633 | |
| 4 | Identify annual base Time on Task (workload in Erlangs) (Demand) | 77896 | 77896 | |
| 5 | (No Lunch and Break Allowance Factor for supervision) | 0 | 0 | |
| 6 | Increase base workload demand (Erlangs) to factor in Lunch and Breaks - (This determines Demand with Breaks) | 77896 | 77896 | |
| 7 | Divide annual adjusted workload hours by the NAWH (which had Lunch and Breaks added back in) (This determines FTEs) | 47.4 | 47.7 | 0.3 |
| 8 | Demand with Breaks Round up adjustment | 82264 | 82264 | |
| 9 | Suggested FTE Staffing (with Round up adjustment) | 50.0 | 50.4 | 0.4 |

| Totals Fitch Option 1 | Fitch | Auditor | FTE Variance | FTE Variance (%) |
|------------------------------|-------|---------|-----------------|------------------------|
| Total Demand with Breaks | 353.3 | 338.8 | (14.5) | -4.1% |
| Total Suggested FTE Staffing | 357.8 | 343.2 | (14.6) | -4.1% |

*** Note: Lunch and Break Allowance Factor Calculations**

Used by Fitch: One hour of Lunch and Break per day = 12.5% Lunch and Break Factor ($1/8 = 0.125$)

Recommended by County Auditor: Thirty minutes of Paid Break per day = 6.25% Lunch and Break Factor ($0.5/8 = .0625$)