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Chesterfield County
Internal Audit
Department

Greg L. Akers, Director
Steve Sanderson, Audit Manager
Khara Durden, Technology Audit Manager
Lora Holland, Senior Auditor
Christopher Meade, Senior Auditor
Terry Parker, Senior Auditor
Jim Boudreau, Staff Auditor
Sandra Fuentes, Staff Auditor
Christian Wingfield, Staff Auditor
Annette Stinson, Administrative Analyst

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to public disclosure.**

Emergency Communications Center

November 22, 2019



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Emergency Communications Center (ECC)



Highlights

Systems Backup and Security

We evaluated critical systems, backup procedures, system updates and security measures. We noted TeleStaff (scheduling software) use is currently limited to scheduling and ECC has plans to integrate time and attendance data for payroll processing.

Commendation: Critical systems backup, user account maintenance, systems updates, monthly backup testing, and staff evacuation training are in place.

Recommendation: Continue coordination with Accounting to begin using TeleStaff time and attendance data for payroll processing in the County's financial systems (ONESolution).

Staff Training and Quality Assurance Reviews

ECC has been accredited since 2006 through the Commission on Accreditation for Law Enforcement Agencies (CALEA). The program sets standards and best practices that provide process to systemically review and internally assess operations and procedures. New hire training requires classroom, on-the-job, and general County training. Staff tested complied with department training requirements but had not completed all County employee required training. ECC performs Quality Assurance (QA) reviews of staff to ensure compliance with call-handling policy and procedures. We reviewed 25 QA reviews and noted the reviews were completed and reviewed with the employees.

Commendation: Internal training and QA reviews were completed.

Recommendation: Strengthen procedures to monitor staff completion of required County annual training.

Staffing and Overtime Monitoring

ECC maintains a shift spreadsheet and uses Telestaff scheduling software to ensure call center is staffed appropriately. Periodic Employee Engagement Surveys performed by Human Resources Management help department management identify changes over time and provide comparison with County-wide averages. Management reviewed the most recent County employee survey from 2017 and has taken reasonable actions to address employee concerns. We also noted annual employee evaluations were performed per County policy. ECC staff overtime hours are monitored regularly and were below the County's annual 700-hour limit.

Commendation: Staff assignment, performance, and overtime were monitored.

Performance Reporting

We tested five key internal performance measures for data reliability and accuracy. We reviewed various call statistics reports and recalculated the reported performance measures, with minimal exceptions noted.

Commendation: Accurate performance monitoring process.

Management concurred with 2 of 2 recommendations detailed in the report to be implemented from April 1, 2020 to July 1, 2020. Internal Audit performs annual follow-up with management to confirm implementation status.

INTRODUCTION

BACKGROUND

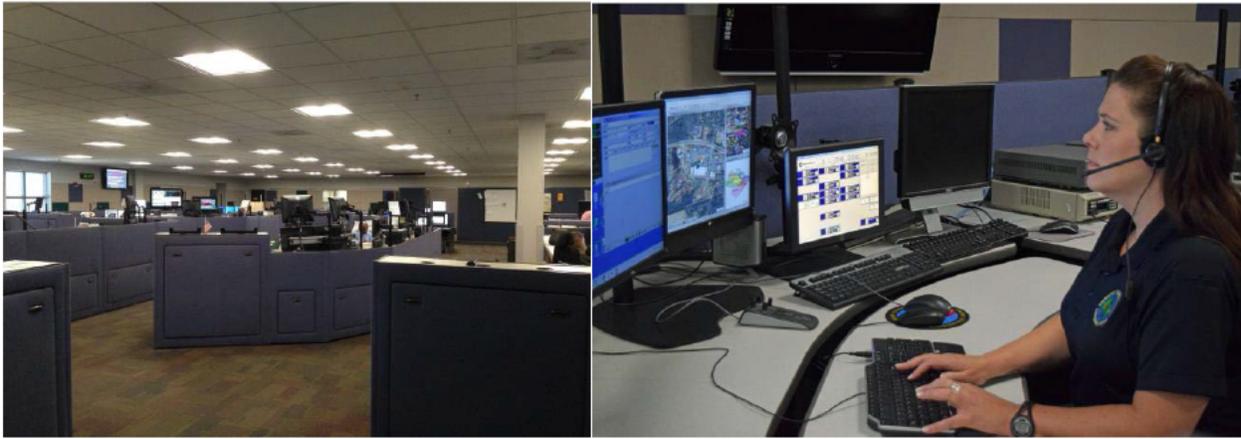
The Chesterfield County Emergency Communications Center (ECC) is a critical public safety link between the citizens of Chesterfield County and Emergency Medical Services (EMS), Fire, Police, Animal Control and the Sheriff. ECC’s director reports to the Police and Fire Chiefs. ECC operates 24 hours a day, 7 days a week as the County’s 911 center. ECC can also access the federal Emergency Alert System for public announcements. This project was included on the FY19 audit plan approved by the Joint Audit and Finance Committee.

ECC’s mission and vision are to “serve as the vital link between the public and other public safety organizations through professionalism and dedication” and “save lives and property through the commitment of our employees to provide a rapid and accurate response,” respectively.



FY19 ECC operational activity is summarized below; 126,380 (84%) emergency calls were answered in 5 seconds or less.

	FY15	FY16	FY17	FY18	FY19
Total 911 calls received	146,400	156,019	171,134	164,047	172,753



OBJECTIVES

Objectives of the audit were to evaluate:

- System(s) application security and backup controls.
- Backup call center controls and emergency evacuations.
- Management controls over personnel for:
 - Training requirements
 - Staffing coverage
 - Quality Assurance process
- Performance reporting accuracy, processes, and monitoring.

SCOPE

Our audit work covered FY19 and the current operating environment. We considered the following code, policies, and procedures during our audit:

<i>ECC Operations Policy 2-03 Supervisory Quality Checks of the Handling of Calls</i>	<i>ECC Training Policy 5-04 ECC New Hire and Career Development Training Program</i>
<i>ECC Training Policy 5-07 Staff Development Training</i>	<i>ECC Administrative Policy 1-10 Filling Minimum Staffing; Reserve/Draft</i>
<i>ECC Equipment Policy 7-04 Emergency Evacuation Plan</i>	<i>ECC Equipment Policy 7-09 Computing Resources</i>
<i>County Policy 6-5 Employee Development Program</i>	<i>County Policy 6-17 Fair Labor Standards Act Compliance</i>
<i>National Emergency Number Association (NENA) 56-005.1 Call Answering Standard/Model Recommendation</i>	<i>Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA) Communications Standards</i>

We conducted this performance 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. Terry Parker, Senior Auditor, and Jim Boudreau, Staff Auditor, performed the audit work. Chesterfield County Internal Audit is a department within the organization of Chesterfield County/Schools.

METHODOLOGY

Detailed information regarding the methodology can be found in the individual point sheets listed in the report. Our methodology included the following: interviews, observations, data analysis, detail testing, and documentation review.

INTERNAL CONTROL CONCLUSION

According to Government Auditing Standards, internal controls, in the broadest sense, encompass the agency's plan, policies, procedures, methods, and processes adopted by management to meet its mission, goals, and objectives. Internal controls include the processes for planning, organizing, directing, and controlling program operations. It also includes systems for measuring, reporting, and monitoring program performance. An effective control structure is one that provides reasonable assurance regarding:

- efficiency and effectiveness of operations;
- accurate financial reporting; and
- compliance with laws and regulations.

Based on the results and findings of the audit test work, auditors concluded that internal controls were in place and there were minimal findings to question the ability to assist management in meeting its mission, goals, and objectives. Recommendations specific to improving these controls can be found in detail further in the audit report.

CLOSING

We would like to thank the Emergency Communications Center for their cooperation and assistance during this audit.

FINDINGS, RECOMMENDATIONS, RESPONSES

Systems Backup and Security

CONFIDENTIAL, FOIA EXEMPT §2.2-3705.2(3) & (6): System and Facility Security

(Point Sheet 1)

CRITERIA:

Industry best practices for computer system security includes installing all computer system updates and patches. Software providers develop system changes when vulnerabilities are identified.

Emergency Communications Center (ECC) Equipment Policy 7-09 Computing Resources outlines computer systems backup requirements which include daily backups to be performed by the County's Information Systems Technology department (IST). The policy also states: "All system user accounts are terminated within 48 hours of employee termination."

ECC Equipment Policy 7-04 Emergency Evacuation Plan outlines evacuation procedures in the event of fire, catastrophic disaster, or any other situation requiring relocation of personnel.

CONDITION(S):

[REDACTED]

FINDINGS, RECOMMENDATIONS, RESPONSES

Systems Backup and Security

CONFIDENTIAL, FOIA EXEMPT §2.2-3705.2(3) & (6): System and Facility Security

(Point Sheet 1, continued)

CONDITION(S) (continued):



CAUSE(S):

- Scheduling data in TeleStaff is not used for payroll time reporting in ONESolution.
- ECC has policies and procedures for systems backup and security.
- Department policy requires prompt removal of unnecessary systems user accounts.
- ECC's Continuity of Operations Plan requires evacuation drill training.

FINDINGS, RECOMMENDATIONS, RESPONSES

Systems Backup and Security

CONFIDENTIAL, FOIA EXEMPT §2.2-3705.2(3) & (6): System and Facility Security

(Point Sheet 1, continued)

EFFECT(S):

- Separate data entry is required for scheduling and payroll processing.
- Policies and procedures help ensure systems are secure and backed-up.
- Unauthorized users of ECC systems are removed promptly.
- Staff are trained on proper evacuation procedures.

COMMENDATION:

Having critical systems backup and security policies and procedures, maintaining system user accounts, and training staff on evacuation procedures.

RECOMMENDATION:

1. Continue coordination with Accounting to begin using TeleStaff time and attendance data for payroll processing in the County's financial system (ONESolution).

MANAGEMENT'S RESPONSE(S):

1. *Concur. Chief of Administrative Services, Chris Snyder, and Automation Coordinator, Allan Weese, are responsible for implementing 7/1/20. Continue coordination with IST, Accounting, and Kronos to upgrade the software to the latest version and implement the payroll integration to eliminate dual payroll entry in Telestaff and ONESolution.*

FINDINGS, RECOMMENDATIONS, RESPONSES

Staff Training and Quality Assurance Reviews

(Point Sheet 2)

CRITERIA:

ECC Training Policy 5-04 New Hire and Career Development Training Program lists required training for new Emergency Communications Officers (ECO).

ECC Training Policy 5-07 Staff Development Training lists annual required training for ECOs. Training covers annual County and specialized ECO courses.

ECC Operations Policy 2-03 Supervisory Quality Checks of the Handling of Calls details the Quality Assurance (QA) process used within ECC to encourage excellence, ensure compliance with agency policy and procedures, and to correct deficiencies through training, and/or disciplinary measures. A minimum of 36 QA's will be performed on each operational employee yearly.

CONDITION(S):



ECC has been accredited since 2006 through the Commission on Accreditation for Law Enforcement Agencies (CALEA). CALEA has become the primary method for a communications agency to voluntarily demonstrate its commitment to excellence. The program sets standards and best practices related to law enforcement and communications and provides a communications center with a process to systemically review and internally assess its operations and procedures. Benefits of CALEA accreditation are:

- Limits an agency's liability and risk exposure.
- Demonstrates verification of excellence.
- Produces better trained public safety personnel.
- Promotes greater accountability within the communications center.
- Provides a management model for agency administration and operations.

Training:

ECC is authorized for 85 full time (74 operational employees / 11 Admin) and five part-time (four operational one background investigator) employees. Administrative staff include the director, four managers, Chief of Administrative Services, Senior GIS Analyst, Senior Automation Analyst, Quality Assurance Coordinator, Training Facilitatory, and Administrative Secretary. Current operational personnel are 65 (which includes four new hires currently in the academy) and three operational part-time staff. New hire training requires over 900 hours of classroom, on-the-job, and general County training. Training is extensive and meets various requirements of Federal and State government organizations including the Federal Bureau of Investigation's National Crime Information Center, Virginia Criminal Information Network, and Virginia Department of Criminal Justice Services. For career advancement, ECOs must complete a minimum of 160 hours of on-the-job training.

FINDINGS, RECOMMENDATIONS, RESPONSES

Staff Training and Quality Assurance Reviews

(Point Sheet 2, continued)

CONDITION(S) (continued):

We selected a sample of eight ECOs to test for compliance with training policies. Training courses tested included:

- Specialized ECO Training:
 - Virginia Criminal Information Network/National Crime Information Center recertification
 - Emergency Medical Services/Emergency Medical Dispatcher
 - Emergency operations plan
 - Hazardous materials
 - Missing/Exploited persons
 - Dispatch equipment
 - Continuity of operations plan
- County Annual Training:
 - Portable fire extinguisher
 - Office ergonomics
 - Employee sexual harassment
 - Workplace diversity awareness/Cultural competency and inclusion
 - Workplace violence
 - Bloodborne pathogens
 - Hazard communications (every 3 years)

All ECOs tested complied with ECO training (one is currently in new-hire training), but sampled ECOs failed to complete training for three of seven County courses within FY19.

The County's Learning and Performance Center (LPC) administers Ulearn, an online training software, used for certain County required training. Departments can request LPC schedule required employee training in Ulearn, and use system reports to monitor completion.

Quality Assurance:

QA reviews ensure compliance with agency policy and procedures to correct deficiencies. Reviews are performed for Police, Fire, and EMS service provided by ECC and include reviews of telephone, radio and teletype operations. Supervisors ensure the type of calls reviewed (Police, Fire and EMS) are not the same agencies each month to provide an overall review of individual performance. The QA reviews are completed and stored in an online database and are performed by the QA Coordinator, Supervisors, Assistant Supervisors, or a manager. During FY19, ECC performed 2,613 QA reviews of staff (average of over 37 per ECO). We selected a random sample of 25 QA reviews and noted the reviews covered a variety of call types, included 19 different ECOs, were fully completed by the reviewer, and the results were shared with the ECOs (the ECO's name and date were indicated at the end of each review).

FINDINGS, RECOMMENDATIONS, RESPONSES

Staff Training and Quality Assurance Reviews

(Point Sheet 2, continued)

CAUSE(S):

- ECC's commitment to continuous improvement through CALEA accreditation.
- ECC management does not track staff completed required County annual training.
- Management tracks all department required training.
- QA policies and procedures are detailed to ensure an effective QA process.

EFFECT(S):

- CALEA accreditation enhances ECC's standards and practices to systemically review and internally assess its operations and procedures.
- Staff did not receive all required County annual training.
- ECC staff completed all required department ECO training.
- QA process ensures ECOs receive feedback to improve job performance.

COMMENDATION:

Maintaining CALEA accreditation, providing department training, and QA review practices.

RECOMMENDATION:

2. Strengthen procedures to track staff completion of required County training.

MANAGEMENT'S RESPONSE(S):

2. *Concur. Programs Manager, Mary-Louise Binford, and Operations Manager, Mary Bowman, are responsible for implementing 4/1/20. Staff will evaluate the appropriate Ulearn classes needed for the ECC and update policy to reflect mandated classes and timeframe of the training completion. The Ulearn system will notify supervision when classes are due or overdue to ensure completion.*

FINDINGS, RECOMMENDATIONS, RESPONSES

Staffing and Overtime Monitoring

(Point Sheet 3)

CRITERIA:

ECC Administrative Policy 1-10 Minimum Staffing details proper call center minimum staffing levels. Day shifts require 15 personnel, evening shifts require between 15 and 16 personnel and midnight shifts require nine or ten personnel.

County Human Resource Management Policy 6-5 Employee Development Program requires employees' annual performance evaluations be completed by July 1st each year.

County Human Resources Management Policy 6-17 Fair Labor Standards Act Compliance states that employees shall not work more than 700 hours of overtime in a calendar year.

CONDITION(S):

Staffing:

ECC maintains a shift spreadsheet with employee assignments (day, evening, and midnight) to ensure call center is staffed appropriately. ECC began using this tool in 2009 and they make updates as staffing changes occur. We reviewed a shift spreadsheet (June 26, 2019) and Telestaff daily shift schedule reports (May 18 – 24, 2019) noting consistency with policy staffing levels.

ECC uses Telestaff time scheduling software for all staff scheduling, paid time off (PTO) requests and approvals and open shift notifications. Telestaff will be integrated with the County's financial system (ONESolution) soon. This will remove duplication of work – currently ECC staff enter PTO requests in Telestaff and ONESolution.

ECC has experienced high turnover for the last few years. The County's Human Resource Management (HRM) department administers an Employee Engagement Survey biennially. Survey results help management identify changes over time and provide comparison with County-wide averages. We reviewed the most recent County employee survey from 2017. We selected five lowest-scoring employee responses and reviewed management's plan to address. The lowest rated Survey responses included staffing sufficiency, work-life balance, and management practices. Since the 2017 Survey, there has been turnover for the Director and most management positions. Management has taken reasonable actions to address employee concerns including: expanding recruiting efforts, increasing employee scheduling input, and improving team communication. The next Survey is planned for 2020 and will provide an opportunity for management to gauge progress.

In addition to the analysis above, we selected five employees to determine annual evaluations were performed per policy requirement. We noted all performance evaluations were completed within HRM timeframes.

FINDINGS, RECOMMENDATIONS, RESPONSES

Staffing and Overtime Monitoring

(Point Sheet 3, continued)

Overtime:

We reviewed ECC staff overtime hours for calendar year 2018 and noted all employees were below the County's annual 700-hour overtime limit. Overtime is tracked monthly to ensure no employee exceeds the 700-hour overtime yearly threshold. Memos are periodically sent to employees advising them of overtime worked and potential of exceeding the threshold. If any employee is in danger of going over, they will be restricted from working any volunteer overtime for the rest of the year.

CAUSE(S):

- ECC call center staffing follows a reasonable methodology and agrees with comprehensive policies and procedures.
- Management reviews HRM surveys to address staff concerns.
- ECC follows HRM policy for timely completing staff annual performance evaluations.
- Management monitors employee overtime.

EFFECT(S):

- ECC staffing methodology ensures emergency calls are answered and processed quickly.
- Staff concerns are addressed by management.
- Timely performance evaluations provide current feedback to staff.
- Overtime monitoring ensure compliance with County policy.

COMMENDATION:

Staff assignment, performance, and overtime monitoring.

FINDINGS, RECOMMENDATIONS, RESPONSES

Performance Reporting

(Point Sheet 4)

CRITERIA:

ECC Operations Policy 2-03 Supervisory Quality Checks of the Handling of Calls and ECC's FY19 Performance Plan includes performance goals for call processing times and identifies several key performance measures including:

1. Answer all 911 calls in five seconds or less, 90% of the time.
2. Process the telephone call and dispatch of all Police Priority 1 calls for service in 90 seconds or less, 85% of the time.
3. Process the telephone call and dispatch of all Priority 2 Fire/EMS calls for service in 120 seconds, 85% of the time.
4. Calls for service entered with the correct location, 100% of the time.
5. Calls reviewed by Quality Assurance, where pertinent information was relayed to field units, at least 95% of the time.

The National Emergency Number Association (NENA) establishes performance measures for emergency call centers. NENA's call answering standards are:

- Ninety percent (90%) of all 911 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour.
- Ninety-five (95%) of all 911 calls should be answered within twenty (20) seconds.

CONDITION(S):

ECC extracts certain call processing data from the Computer Aided Dispatch (CAD) and Inform 911 phone systems. Summarized monthly data is compared with performance goals. ECC FY19 reported performance results were:

1. 84% of 911 calls were answered in five-seconds or less (goal 90%).
2. Police Priority 1 calls were processed within 90 seconds, 85% of the time (goal 85%).
3. Fire/EMS Priority 2 calls were processed within 120 seconds, 89% of the time (goal 85%).
4. Calls for service entered with the correct location, 100% of the time (goal 100%).
5. For calls reviewed by Quality Assurance, pertinent information was relayed to the field units, 100% of the time (goal 95%).

We tested the performance measures listed above for data reliability and accuracy. We reviewed various call statistics reports and recalculated the reported performance measures, with minimal exceptions noted.

We also compared ECC's FY19 call answer times to NENA performance measures and noted ECC answered 89% of 911 calls received within ten seconds (goal 90%), and 93% of 911 calls received within twenty seconds (goal 95%).

FINDINGS, RECOMMENDATIONS, RESPONSES

Performance Reporting

(Point Sheet 4, continued)

CAUSE(S):

- ECC has processes to collect and report data for established performance goals.

EFFECT(S):

- ECC management has accurate information for decision making.

COMMENDATION:

Accurate performance monitoring process.