

Emergency Management and Business Continuity

Internal Audit Report
January 15, 2019



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EXECUTIVE SUMMARY

Why We Did This Audit

This is a planned engagement derived from the annual audit risk assessment process.

The objective of this audit is to assess the status of the district's emergency management and continuity of operations program.

This audit was included in the 2017-2018 Annual Audit Plan.

What We Found

We found:

- the school-based plans are tested regularly;
- there is no Board-adopted Continuity of Operations policy;
- there is no Board-adopted Emergency Management policy for administrative areas;
- departmental plans are either incomplete or missing sections;
- departmental plans are not current; and
- departmental plans need to be tested periodically to ensure they will work when needed.

Our overall conclusion is that OCPS has:

- a good Emergency Management program for schools; and
- a good start for its Continuity of Operations program but needs to enhance it and keep it current.

What We Recommended

- A School Board-adopted Emergency Management policy for non-school locations
- A School Board-adopted Continuity of Operations policy to support the existing procedures
- An assessment of the various potential risks OCPS and its business functions could experience should be reviewed annually
- The district's Continuity of Operations Plan (COOP) needs to be updated and kept current
- Each of the individual department's COOP needs to be updated and kept current
- Each department's COOP needs to have a map or written directions to alternate operational location(s)
- All departmental COOPs should contain complete information
- Each department's Recovery Point Objectives (RPO's) and Recovery Time Objectives (RTO's) should be reviewed and approved by management
- There should be a log of Senior management approving the plan
- OCPS should have a written COOP testing policy, which would include a minimum frequency of testing and a minimum extent of testing
- The Continuous Improvement Plan should include target completion dates.

This report has been discussed with management and they have prepared their response, which follows.

BACKGROUND:

Emergency Management and Business Continuity are important to keep students, employees, and facilities safe. The purpose is to plan for adverse eventualities in order to protect lives, safeguard property and systems, and to minimize their impact on the district’s critical mission of teaching students. At OCPS, the Emergency Management and Business Continuity Department manage these functions.

The term Business Continuity is generally viewed the same as Continuity of Operations, which is more focused on government and the public sector. From here forward, we shall use the term “Business Continuity” in reference to the district’s department name, “Emergency Management and Business Continuity” and use the term “Continuity of Operations” to reference the continuation of business processes after an adverse event.

Two types of planning are addressed in this audit:

1. Emergency Management - involves planning and knowing what to do immediately as an adverse event starts to unfold (such as a fire or hurricane)
2. Business Continuity Management - applies in the aftermath of an adverse event, and involves planning and knowing what to do to get critical business processes operating and back to normal in support of the district’s critical mission.

Any effective response to an adverse event, and its aftermath, requires proper planning and coordination of emergency preparation efforts long before an event occurs.

Emergency Management’s immediate objective is protecting lives, and safeguarding property and systems, and is generally of shorter duration. It is knowing what to do immediately when the fire alarm sounds, when a lockdown occurs, or when a hurricane is projected to be imminent. The Continuity of Operations objective is longer term and focused on how to support the district’s mission critical functions as quickly as possible and to resume normal operations.

For Continuity of Operations, pre-emptive planning includes the following key steps, in this order:

The Emergency Management and Business Continuity Department manages these functions for OCPS.

Types of planning addressed in this audit:

- *Emergency Management*
- *Business Continuity Management*

Emergency Management -

- *Protects lives*
- *Safeguards property*
- *Shorter duration*

Continuity of Operations -

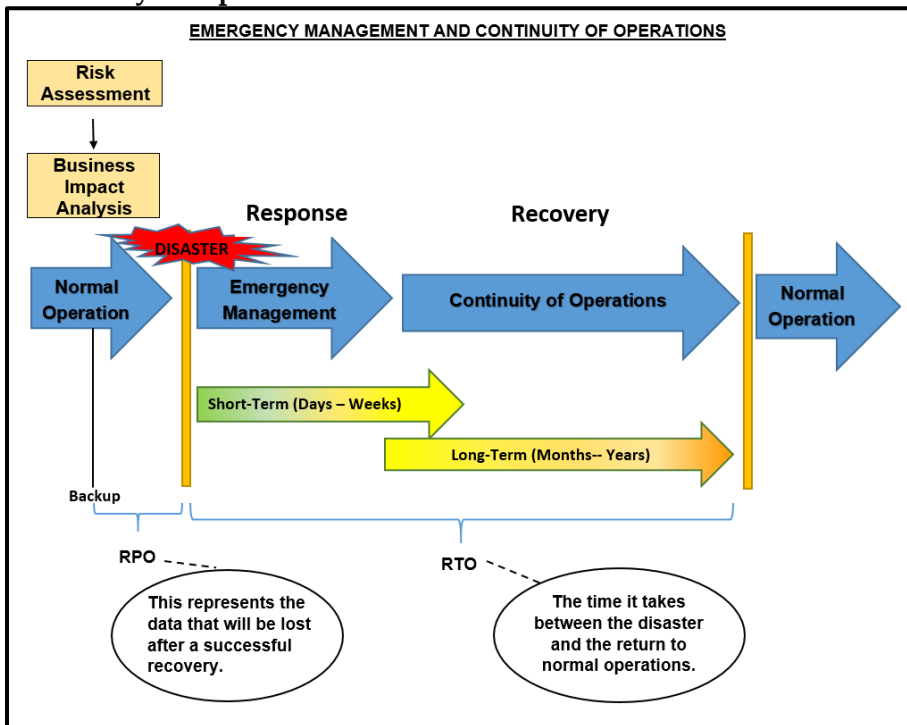
- *Support of mission-critical functions*
- *Resume normal operations*
- *Longer term*

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- a Risk Assessment of likely risks for each organizational function and site
- a Business Impact Analysis to gauge the impact of these risks to the organization's critical processes needed to continue its central mission

After these steps are complete, an effective plan or plans can be prepared to mitigate the adverse impact of the risks. (See Diagram 1.)

Diagram 1 – Understanding of Emergency Management and Continuity of Operations



Source: Jan Skjersaa, Internal Auditor

Emergency Management is "Be Prepared" while Continuity of Operations is a "Plan B" approach to continue the processes.

Note: ITS is a key department in the plan as most other departments depend heavily on their processing capability at some level. Currently, ITS performs daily backups and replicates these offsite to Alpharetta, GA; however, there is not a fully tested Disaster Recovery plan on file. Thus, the level of support ITS will provide during an adverse event will depend on how significantly the event affects ITS directly.

Pre-emptive planning includes assessing likely risks and gauging their impact to critical processes.

Emergency Management = "Be Prepared"
Continuity of Operations = "Plan B"

Are we ready?
Can we continue afterward?

OBJECTIVE, SCOPE AND METHODOLOGY:

Objective

The objective of this audit was to assess the status of the district's emergency management and continuity of operations program. Are we as prepared as possible for adverse events and will we be able to continue our operations afterward?

Scope

The scope of the audit included:

- reviewing the program and the policies and procedures that exist today, and,
- reviewing evidence of events, training, or program status in the previous 12 months prior to the audit.

Methodology

This audit looked at both plan types, Emergency Management and Continuity of Operations. We assessed the support management has provided them, the methodology used for implementation, how extensive or detailed the plans are, how current the plans are, and whether the plans are tested. We also surveyed the departments on certain aspects of their plans.

Our audit methodology included:

- interviewing personnel of the Emergency Management and Business Continuity Department;
- reviewing School Board policies and departmental procedures;
- reviewing the COOP documents and data held in the SharePoint site of the department;
- observing a District Incident Management Team meeting;
- surveying the heads of the other departments with OCPS mission critical processes about their preparedness; and,
- researching best practices (David Everest, Roy E. Garber, Michael Keating, Brian Peterson (July 2008). *Business Continuity Management: GTAG – Global Technology Audit guide – IPPF-Practice Guide*)

We assessed:

- *Management support of plans*
- *Methodology used*
- *Plan details*
- *Are plans current?*
- *Are plans tested?*

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Our audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* of the Institute of Internal Auditors and included such procedures as deemed necessary to provide reasonable assurance regarding the objective. Internal Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. We are required to note any material deficiencies in accordance with Florida Statutes, School Board Policy and sound business practices. We also offer suggestions to improve controls or operational efficiency and effectiveness.

FINDINGS & RECOMMENDATIONS:

1) Emergency Management Policy and Procedures for Non-School Locations – *High Risk*

Best Practice: Preparing for emergencies is important to minimize the loss of life, and to protect assets and systems. A policy, adopted by the School Board, to prepare for an emergency in non-school locations would provide guidance toward that end.

Audit Finding: There is no Emergency Management policy and procedure in place for the non-school locations of OCPS. There are laws, statutes, and policies for the safety of students and school-based personnel, but there is not a similar requirement for the administrative and support personnel located off school property.

Recommendation: There should be a School Board-adopted Emergency Management policy for non-school locations.

This audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

There is no Emergency Management policy or procedures for non-school locations.

2) School Board-Adopted Continuity of Operations policy – *High Risk*

Best Practice: After an adverse event occurs, an organization needs to continue to function and depend on the day-to-day processes for support. A “Continuity of Operations” policy would provide guidance in preparing for the aftermath of the event and to resume normal operations as soon as possible.

Audit Finding: The department has a Continuity of Operations Plan (COOP), which provides a framework for OCPS to restore mission critical functions to stakeholders if an adverse event affects operations. There are two levels to this plan:

- an OCPS district-level plan; and
- a department-level plan for each department with OCPS mission critical processes.

The district-level plan is only as good as the various department-level plans function and interact with one another. For example, if Accounts Payable can print checks but Treasury is unable to fund them, the District is still unable to complete the payment function. The COOP should be governed by School Board policy.

Recommendation: The School Board should adopt a Continuity of Operations policy.

3) Assess Risks Annually – *High Risk*

Best Practice: The assessment of potential hazards should be evaluated annually in order to add any new risks and remove risks that are no longer a threat.

Audit Finding: The Orlando/Orange County Urban Area Security Initiative (UASI) performed a “Threat and Hazard Identification and Risk Assessment” (THIRA) in 2012. OCPS adopted and expanded on this report to identify and evaluate hazards specific to the district in order to develop its own risk assessment. This was the last time it was reviewed and updated. We were informed that the Orlando/Orange County UASI met in September 2018 and the THIRA has subsequently been updated.

There is no Continuity of Operations policy.

Risks should be assessed annually.

Recommendation: The district's risk assessment should be reviewed on an annual basis in order to maintain currency.

4) District COOP Needs to be Updated and Kept Current – High Risk

Best Practice: The *district's* COOP needs to be reviewed and updated at least annually to give OCPS the best chance of making it through an adverse event. Departmental interactions, processes, systems, and employees change constantly.

Audit Finding: The *district* COOP has not been updated since June 2012. An employee that left over four years ago was still listed on the plan.

Recommendation: The *district* COOP needs to be reviewed, at least annually, and kept current to be effective.

5) Departmental COOPs Need to be Updated and Kept Current – High Risk

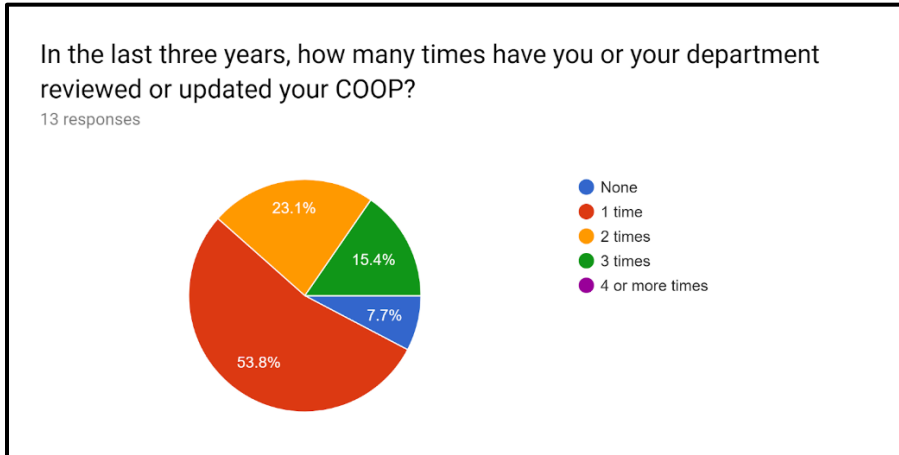
Best Practice: The *departmental* COOPs need to be reviewed and updated at least annually by each department. Processes, systems, and employees change constantly. The COOP can become out-of-date quickly and unusable if actually needed.

Audit Finding: Most *departmental* COOPs are not current. Several departments have not updated their COOP since February 2009. Over this almost 10-year period, processes, systems, and employees have changed. A survey of departments showed that 61.5% of those that responded have reviewed or updated their COOP only once in the last three years. (See Chart 1.)

The district's COOP has not been updated since 2012.

Departmental COOPs are not current.

Chart 1 – Frequency of *departmental* COOP review or update



61.5% of responding departments have reviewed or updated their COOP only once in the past three years.

Recommendation: Each *departmental* Continuity of Operations Plan needs to be reviewed at least annually, and kept current in order to be effective when needed.

6) Map or Directions to Alternate Operational Locations – *Low Risk*

Best Practice: A good Continuity of Operations Plan will have one or more designated alternate operational locations and a map or directions to such. In a time of need, this may be the only information available about the alternate location. This will be important for new employees who might not yet be familiar with the area.

Audit Finding: A review of the *departmental* Continuity of Operations Plans showed that none had a map or directions to an alternate location; however, some did have an alternate location stated. Other plans stated that an alternate location would be communicated to them during an event, or its aftermath, by the COOP Relocation Team. This COOP Relocation Team will include 1) Building Code and Compliance, 2) Security Services, and 3) Executive Cabinet. A better practice would be to have an alternate location planned and then, if that location is not available, have the COOP Relocation Team serve as a backup to assign a new location. This creates a plan and a backup plan.

Recommendation: The *departments'* Continuity of Operations Plan (COOP) should have a designated alternate operational location and a map or directions to that location.

Maps or directions to Alternate Operation Locations are not included in COOPs.

7) Departmental COOPs Should Be Complete – *High Risk*

Best Practice: Each *department's* Continuity of Operations Plan should be complete. It should include a list of necessary actions to perform in the event of a disaster, vendor contact information, documentation of the current processing environment and/or details of alternate operational space. It should be kept current and ready. Newer employees may need to rely on it as they might not yet have much experience.

Audit Finding: During the audit, we found some *departmental* COOPs had incomplete or missing information. Missing information included:

- a list of actions to perform in the event of a disaster;
- vendor contact information;
- current processing environment information; and/or,
- details of alternate office space.

Recommendation: Each COOP should have all sections completed with the requisite information in order to be effective. If a section does not apply, it should be noted as such.

8) Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO) – *Moderate Risk*

Best Practice: The Recovery Point Objective is the amount of data that will be lost or destroyed after a successful recovery. (A good example is the amount of information lost between the last time you saved your Word document and when your computer locked up.) The Recovery Time Objective is the window or amount of time that will elapse between a disruption in service and the resumption of normal processing. (See Diagram 1.)

The RPOs and RTOs need to be reviewed and approved by management on an annual basis. This will give management the opportunity to make any needed adjustments to the plan if the planned timeframes are not adequate to support OCPs mission critical processes. This also helps to manage expectations when the plans are actually needed.

Some departmental COOPs were incomplete or were missing information.

RPO = The amount of data that will be lost after a successful recovery.

RTO = The window of time that will elapse between a disruption and resumption of normal processing.

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Audit Finding: The RPOs and RTOs are not being reviewed and approved by management on an annual basis.

Recommendation: The review and approval of each department's RPO's and RTO's should be performed by management on an annual basis.

9) Record of Senior Management Approval of the plan – *Moderate Risk*

Best Practice: There should be some form of evidence of senior management review and approval of the *district's* Continuity of Operations Plan. This could be in the form of a log or sign off sheet that can be reviewed for that approval. The log could also track the history of reviews of revised plans as well.

Audit Finding: We were told that senior management had reviewed the *district* COOP, but there was no record of it.

Recommendation: There should be a record of senior management signing-off on the plan to expressly acknowledge its review and approval.

10) COOP Testing Policy to Support Procedures – *High Risk*

Best Practice: There should be a testing policy in place that will ensure that the *district's* and each *department's* Continuity of Operations Plan will be tested. The policy ideally would address that the district and department plans will be tested, and the frequency of such testing (annually is usually the minimum). The testing policy should provide a level of assurance each plan will be effective when needed. During an event is not the time to find out a plan does not work.

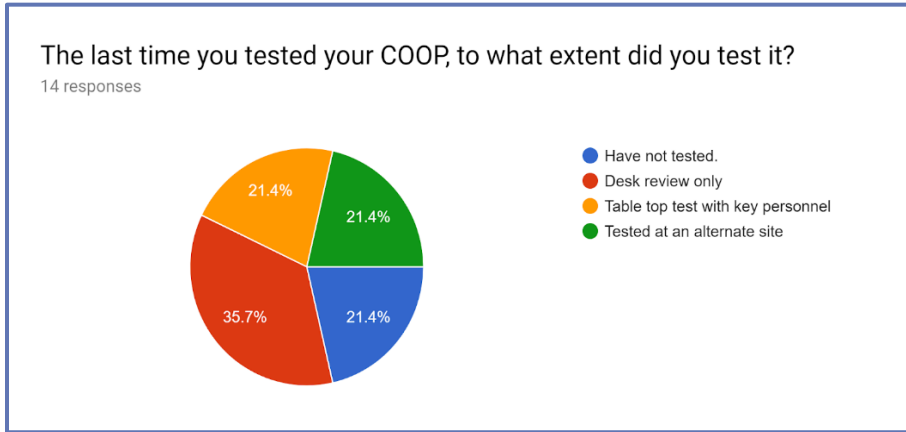
Audit Finding: There is no testing policy in place to support Emergency Management and Business Continuity departmental procedures in its objective of Continuity of Operations. In the survey, 21% (3 of 14) of the responding departments had not tested their plans at all. (See Chart 2.)

RPO's and RTO's are not reviewed and approved by management.

There is no record of COOP approval by senior management.

There is no testing policy to support Continuity of Operations procedures.

Chart 2: Extent of Departmental COOP Plan Testing



21% of responding departments have never tested their COOP.

Recommendation: A testing policy should be adopted by the School Board requiring that the district’s and each department’s COOP be tested for effectiveness annually to prepare OCPS for an adverse event.

11) Continuous Improvement Plans Should Include Target Completion Dates – *Low Risk*

Best Practice: A Target Completion Date field should be used to improve effectiveness in a continuous improvement plan.

Audit Finding: A spreadsheet was prepared by the department to record where improvements were needed in the OCPS response to hurricane Irma. The spreadsheet had fields for the Division (or department), Timeframe (before, during, or after the hurricane), Corrective Action, Level, Responsible Party, and Status, but it did not have a field for a Target Completion Date.

Recommendation: Each of the items on the Continuous Improvement Plan should include target completion dates. This will improve accountability and effectiveness.

Continuous Improvement Plans should include target completion dates for accountability.

We wish to thank the staff of the Emergency Management and Business Continuity, Risk Assessment Departments, and those who anonymously responded to our survey.



Department / School Name	Safety and Emergency Management Office of Emergency Management and Business Continuity
Administrator / Department Head	Doug Tripp, Senior Director – Safety and Emergency Management
Cabinet Official / Area Superintendent	Roberto Pacheco, Chief Operations Officer

Exception Noted (Finding / recommendation)	Management Response (Corrective Action)	Responsible Person (Name & Title)	Expected Outcome & Completion Date What is the evidence of the corrective action?
What is? What should be?	What needs to be done?	Who needs to do it?	When will the action be completed? (MM/YYYY)
A School Board-adopted Emergency Management policy for non-school locations	SEM staff will conduct research on topic, and submit findings related to policy or management directive with executive leadership	Kate Hardie- Director, Emergency Management and Business Continuity	Staff will submit findings and implement approved recommendations by 12/2019
A School Board-adopted Continuity of Operations policy to support the existing procedures	SEM staff will conduct research on topic, and submit findings related to policy or management directive with executive leadership	Kate Hardie- Director, Emergency Management and Business Continuity	Staff will submit findings and implement approved recommendations by 12/2019
An assessment of the various potential risks OCPS and its business functions could experience should be reviewed annually	SEM staff will research topic, and identify potential approaches to routinely categorize and prioritize potential risks	Kate Hardie- Director, Emergency Management and Business Continuity	Staff will submit findings, and implement approved recommendations by 12/2019
The district’s Continuity of Operations Plan (COOP) needs to be updated and kept current	SEM staff completed a comprehensive re-write of the district plan in December 2018	Penni Long – Administrator, Business Continuity and Disaster Recovery	Revised district plan will be finalized and released by 12/2019 and include a regular maintenance cycle



<p>Each of the individual department's COOP needs to be updated and kept current</p>	<p>Most of the out-of-date department COOP plans are from the 2009 initiative and include departments who have been re-organized</p> <p>For the 2018 update, SEM staff focused on critical and essential departments through the District Incident Management Team (DIMT)</p> <p>Throughout 2019, SEM staff will work with those departments who have not updated/completed their plans and who may or may not be on the DIMT.</p>	<p>Penni Long – Administrator, Business Continuity and Disaster Recovery</p>	<p>Revised department plans will be finalized and released by 12/2019 and include a regular maintenance cycle</p>
<p>Each department's COOP needs to have a map or written directions to alternate operational location(s)</p>	<p>SEM staff will introduce this recommendation during the annual COOP workshop</p>	<p>Penni Long – Administrator, Business Continuity and Disaster Recovery</p>	<p>COOP workshop will be held no later than 07/2019, and include the revised process around maps and written directions to alternate relocation facilities (ARF)</p>
<p>All departmental COOPs should contain complete information</p>	<p>SEM staff currently provide guidance, training and support to departments as they complete their COOP plans</p> <p>SEM staff currently conduct reviews of submitted department plans, and address areas requiring</p>	<p>Penni Long – Administrator, Business Continuity and Disaster Recovery</p>	<p>Revised department plans will be finalized and released by 12/2019 and include an ongoing review of content by SEM staff</p>



	additional information prior to finalization		
Each department’s Recovery Point Objectives (RPO’s) and Recovery Time Objectives (RTO’s) should be reviewed and approved by management	RTOs were reviewed by SEM and department management staff during the 2018 updates and will continue to be part of the annual review process	Penni Long – Administrator, Business Continuity and Disaster Recovery	Instructions will be reinforced in the revised department plan template and reiterated through the annual workshop; revisions to instructions and the annual workshop will be accomplished by 07/2019
There should be a log of senior management approving the plan	SEM will explore options to document senior management’s approval of the plan	Penni Long – Administrator, Business Continuity and Disaster Recovery	Based on findings, a mechanism to log senior management approval of plans will be implemented by 01/2020
OCPS should have a written COOP testing policy, which would include a minimum frequency of testing and a minimum extent of testing	SEM staff will conduct research on topic, and submit findings related to policy or management directive with executive leadership	Penni Long – Administrator, Business Continuity and Disaster Recovery	Staff will submit findings and implement approved recommendations by 12/2019
The Continuous Improvement Plan should include target completion dates	SEM will ensure this is included in current and future continuous improvement items	Bob Boyd – Administrator, Emergency Management and Business Continuity (Planning)	Current continuous improvement items will be given timeframes by 04/2019