



**Internal Audit Report**  
**Overall Disaster**  
**Preparedness:**  
**Recommendations Follow-up**  
***Plan Review***

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# Auditor's Opinion

February 13, 2019

Internal Audit has completed the Plan Review section of the Overall Disaster Preparedness: Recommendations Follow-up engagement. We conducted this engagement as part of our 2018 Annual Audit Plan.

The audit objective was to assess the response adequacy to the initial engagement's findings and recommendations in accordance with City Management directives.

For this portion of the engagement, Internal Audit:

- Interviewed the Office of Emergency Management (OEM) manager and staff.
- Interviewed the appropriate Information Technology (IT) staff, Risk Management staff, Department Directors, and City Management.
- Reviewed the current status of the recommendations.
- Reviewed compliance with the disaster emergency management ordinance.
- Reviewed the department/division level disaster recovery and continuing operations plans.

The initial engagement report included eleven recommendations. Management implemented three, rejected one, and has made progress implementing the remaining eight. It is our opinion, based upon the results of our engagement procedures, that the implementation of the recommendations from the initial engagement is not yet satisfied. Most importantly, City departments have not yet satisfied the recommendation of complete, written continuing operations plans. We have identified additional issues and recommendations in the Issue Details section of this report.



Wayne C. Sommer  
Internal Audit Manager

# Audit Profile

## **Audit Team**

Wayne Sommer – Manager  
Sheree Van Buren – Lead

## **Background**

In 2017, Internal Audit (IA) completed an assessment of the City's overall disaster preparedness including planning and execution capabilities, adequacy of facilities, technology, and communication planning, and staff's response awareness. While there are many facets to disaster preparedness, the engagement focused on the collaborative efforts between City departments and OEM to prepare City staff to continue operations during an emergency event. Internal Audit's review included reviewing the department continuing operations plans (COOPs) and surveying City staff. Internal Audit concluded that the plans were outdated, some even 10 or more years old. We also found that many staff were unaware of their plan or not properly prepared to respond accordingly. We developed recommendations that the departments update their existing plans and work with OEM and IT to ensure plan annexes (sections) were adequately documented and feasible. City Management directed a rapid response to the engagement's findings and recommendations.

## **Scope**

The scope period will be from April 1, 2017 - March 30, 2018.

\*Noted: The initial engagement report was released on April 3, 2017.\*

## **Methodology**

Internal Audit conducted the follow-up engagement to assess the response adequacy to the original recommendations. To accomplish this, we reissued the initial awareness survey to City staff and reviewed the updated COOPs for completion. We issued the report on the survey results separately on December 4, 2018.

This report focuses on the status of the initial engagement recommendations and the results of Internal Audit's review of the documentation completeness of the COOPs. We did not evaluate the feasibility of the actions documented within the individual department plans. OEM, the departments, and plan owners are the subject matter experts and therefore responsible for determining what documentation is necessary for business continuity purposes. We examined the plans to see that the departments addressed the required annexes.

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## City Progress on Disaster Recovery and COOP Planning

In response to the initial engagement, the City Manager immediately tasked the departments under his authority with updating their COOPs and submitting them to OEM for review by the end of the summer 2017. OEM held disaster recovery plan review workshops, inviting department representatives to learn how to document the plan. OEM also provided the option to conduct follow-up meetings with each department. With the exception of IT, General Management, and the Homelessness Program, OEM received the updated plans from the departments in August 2017<sup>1</sup>.

The City Manager also tasked OEM with completing a citywide full-scale exercise by the end of 2017. Based upon OEM's initial review of the submitted plans, it was determined that this exercise would not be achievable as the plans did not meet certain written requirements nor was there sufficient time to train and prepare staff to respond to an exercise even with sufficiently documented plans. IT reviewed a sampling of the plans. They determined that the existing IT expectations within the plans were unrealistic in relation to the required technology support and currently available capabilities.

To continue addressing the initial engagement recommendations and better prepare the City for a 4<sup>th</sup> quarter 2018 emergency/disaster exercise, OEM developed a new road map. This road map began with a seminar held with the Department Directors and plan writers in March 2018. During this seminar, OEM discussed the importance of having a written plan, likely scenarios for the City of Aurora, and shared tips on how to address the likely scenarios in the documented plans. Following the seminar, OEM scheduled meetings with each department to discuss their existing COOP and to identify gaps and possible remedies.

Figure 1--OEM Roadmap



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<sup>1</sup> The IT department's COOP is heavily dependent on the other departments completing their plans. IT determined it would be best to develop the IT plan based on the department priorities recorded in their completed plans. Initially, General Management and the Homelessness Program were not asked to submit plans. Since August 2017, OEM has had discussions with General Management and the Homelessness Program to develop COOPs. Although the City Attorney and Court Administration departments are not under the City Manager's authority, the OEM Manager has had conversations with both entities and is working to gain compliance.

## Status of Initial Engagement Recommendations

The progress against Internal Audit’s original recommendations is included below.

Recommendation <sup>2</sup>	Status	Target Implementation Date
<b>OEM Authority (Part One) and Department Interaction (Part Two)</b>	<p><b>Part One:</b>  <b>Rejected – OEM Authority Structure</b>            City Management decided not to elevate OEM’s location in the City structure from Aurora Fire to a direct report to the City Manager.</p> <p><b>Part Two:</b>  <b>Not implemented – OEM Department Interaction</b>  <i>Outstanding: OEM has not fulfilled setting minimum plan requirements or approving the department plans.</i></p>	<p><b>Part One:</b>            May 2017</p> <p><b>Part Two:</b>            Please see ISS.1</p>
<b>Department/Division Level Plan Updates</b>	<p><b>Not implemented</b>            OEM performed an initial review of the department COOP plans in 2017, however, was not able to complete the reviews in its entirety, as some departments did not submit updated plans. OEM continues to meet with the departments to ensure well-documented and completed plans. The Life Line<sup>3</sup> (a total of six) Departments received focused workshops and initial training (including a tabletop and a functional exercise in November 2018).</p> <p><i>Outstanding: The final review and sign-off of City COOPs. OEM expects updates of the plans after exercises and tests of the plans.</i></p>	<p><b>Original date:</b>            December 2017</p> <p><b>Revised date:</b>            Updates-Ongoing</p>
<b>Alternate Locations</b>	<p><b>Not implemented</b>            OEM reviewed the alternate locations in the updated COOP plans and advised departments that some of the initial sites identified were not feasible. Departments are now more geographically dispersed in their alternate location selection. OEM continues to meet with the departments to ensure well-documented and completed plans</p> <p><i>Outstanding: The final review and sign-off of City COOPs and completion of the November exercise. As stated above, all city</i></p>	<p><b>Original date:</b>            December 2017</p> <p><b>Revised date:</b>            March 2019</p>

<sup>2</sup> For the full documentation of the initial recommendations, please see the initial engagement report dated April 3, 2017. For each recommendation, Internal Audit obtained the current status from the historical view of TeamCentral (the Internal Audit recommendation tracking system) and by independently verifying recommendation implementation. The original date is the estimated implementation date agreed upon by Management. However, Management has the ability to revise the estimated implementation dates if they require more time to satisfy the recommendations. Shown under ‘revised date’ are the revised target dates where applicable.

<sup>3</sup> Life Line departments: Aurora Fire, Aurora Police, Aurora Water, Finance, Fleet, Information Technology, Office of Emergency Management, Public Safety Communications, Public Works, and Purchasing (discussed further on page 9)

<b>Recommendation<sup>2</sup></b>	<b>Status</b>	<b>Target Implementation Date</b>
<b>IT Coordination-related to COOP</b>	<p><i>departments have not completed their COOP plans.</i></p> <p><b>Not implemented</b> IT and OEM coordination has increased significantly. IT will review the department COOPs and participate in tabletop meetings and functional exercises. (See ISS.5)</p> <p><i>Outstanding: The final review and sign-off of City COOPs and completion of the November exercise.</i></p>	<p><b>Original date:</b> December 2017</p> <p><b>Revised date:</b> May 2019</p>
<b>Recovery Plan</b>	<p><b>Not implemented</b> The Recovery Plan documentation is complete.</p> <p><i>Outstanding: The Recovery Plan documentation is complete. OEM staff has agreed that this plan now needs to be trained and tested throughout the City. The Debris Management Annex portion of the plan is being sent to the State of Colorado for their review and feedback. This portion of the plan would provide additional reimbursement during a disaster declaration. Citywide training on the plan is anticipated to take place during 2019.</i></p>	<p><b>Original date:</b> October 2017</p> <p><b>Revised date:</b> November 2019</p>
<b>Man-made Hazard Plan</b>	<p><b>Not implemented</b> <i>Outstanding: OEM reprioritized plan development and focused efforts towards COOP and Recovery Plan implementation. The development of a Man-made Hazard Plan is important but not as time sensitive as the aforementioned plans. The documentation of this plan is still moving forward. OEM will align the risk assessment to be consistent with the new FEMA Stakeholder Preparedness Review and Threat and Hazard Identification Risk Assessment requirements.</i></p>	<p><b>Original date:</b> June 2018</p> <p><b>Revised date:</b> November 2019</p>
<b>IT COOP Plan</b>	<p><b>Not implemented</b> There have been infrastructure improvements to prepare for disaster recovery testing of OneSolution and Versadex Police Records Management systems.</p> <p><i>Outstanding: The IT plan is dependent upon departments completing their plans (see ISS.5). Developing a comprehensive disaster recovery/continuing operations plan that encompasses the City's critical IT systems is a subset of the larger effort to have well documented and executable plans for all City departments.</i></p>	<p><b>Original date:</b> December 2017</p> <p><b>Revised date:</b> February 2019</p>

<b>Recommendation<sup>2</sup></b>	<b>Status</b>	<b>Target Implementation Date</b>
<b>Use of Everbridge System and Training</b>	<b>Implemented</b> OEM is satisfied that Public Safety Communications personnel receive proper training on the use of the Everbridge system. OEM staff has also dedicated more time to training on the system and enhancing their capabilities by working with IT and Everbridge staff.	June 2017
<b>Bold System and Solution</b>	<b>Implemented</b> It was determined that the City could house the plans internally (via SharePoint). OEM cancelled its Bold Solutions subscription.	May 2017
<b>EOC Computer Placement/Protection</b>	<b>Implemented</b> IT assembled computer stands to raise all units three inches off the floor.	May 2017
<b>Annual Report to City Council</b>	<b>Implemented</b> An annual report of activities was provided to City Council through the Public Safety, Courts, and Civil Service Committee. OEM staff will continue to provide an annual update to City Council.	November 2018

Much of the effort since the initial engagement has been directed toward updating City departments' and divisions' (where applicable) plans, as the plans specify the actions to be taken before, during, and after an emergency or disaster. As such, the remainder of this report will focus on the documentation status of the City COOPs.

## Continuing Operations Plans Citywide

As noted above, OEM and IT determined that the City would no longer maintain the plans within the Denver Metro COOP Bold system (Bold) but would maintain the plans on a City Share Point site. While not mandated that the departments use Bold as a template, many departments retained the Bold format when updating their plans. The Bold template contained 18 annexes labeled "A – R"<sup>4</sup>. Internal Audit used OEM's department designations for *Life Line* departments and *continuing operations* departments for our reporting. Internal Audit examined each plan for documentation completeness against the 18 Bold annexes. We assessed completeness as follows.

- **Complete:** The plan owner/writer fully documented and updated this annex with names, contact information, duties, resources, equipment, supplies, etc. to address the annex requirements.
- **Partially Complete:** The plan owner/writer did not fully document the requirements of the annex. The annex may be missing a significant portion of documentation or may contain outdated information.
- **Incomplete:** The plan owner/writer did not document the annex requirements at all or the annex is missing from the plan altogether.

<sup>4</sup> See Appendix A for the full list of Bold template annexes.



The following charts show the completion percentage for each plan based on the number of *Complete* annexes as defined above (division level plans are in italics<sup>5</sup>). No department or division achieved 100% completeness<sup>6</sup>. However, utilizing this singular template/example does not reflect the functional proficiency of the plans. For example, after conducting analysis, testing and review of the Aurora Police Department plan, their staff made the decision to utilize an alternate format. OEM does not believe that the chart below is truly reflective of the level of functionality of the plans<sup>7</sup>.

<b>Life Line % Complete</b> ( <i>compared to Bold Template</i> )	<b>Percentage Complete</b> ( <i>High to low</i> )
<b>Fleet</b>	<b>94%</b>
<b>Aurora Water</b>	<b>78%</b>
<b>Public Works</b>	<b>72%</b>
<b>Aurora Fire</b>	<b>67%</b>
<b>OEM</b>	<b>61%</b>
<b>Public Safety Communications (Dispatch)</b>	<b>61%</b>
<b>Purchasing</b>	<b>61%</b>
<b>Aurora Police</b>	<b>44%</b>
<b>Finance</b>	<b>33%</b>
<b>Information Technology (IT)</b>	<b>0%</b>
<i>IT plan is dependent on department plans (see ISS.5)</i>	
<b>Continuing Operations<sup>8</sup> % Complete</b> ( <i>compared to Bold Template</i> )	<b>Percentage Complete</b> ( <i>High to low</i> )
<b>Parks Recreation Open Space (PROS)</b>	<b>82%</b>
<b>Communications</b>	<b>78%</b>
<b>Neighborhood Services</b>	<b>61%</b>
<b>City Clerk</b>	<b>44%</b>
<b>Human Resources</b>	<b>28%</b>
<b>Planning Development Services</b>	<b>17%</b>
<b>Library Cultural Services</b>	<b>11%</b>

<sup>5</sup> During the initial engagement, Internal Audit noted a lack of division level planning. As to whether to create division level plans, per the OEM Manager, this decision is left with the department. The OEM Manager believes that the tabletop exercises, occurring in November, will reveal the need for division level planning, where applicable.

<sup>6</sup> Appendix B contains Internal Audit comments and observations made on some of the annexes from the Bold template.

<sup>7</sup> See further discussion in ISS.1 of the Issue Details section.

<sup>8</sup> General Management and the Homelessness Program were not asked to submit plans.

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We noted that the Homelessness Program and the City's General Management departments were initially not asked to submit plans. In order to ensure a well prepared City and to comply with City ordinance<sup>9</sup>, all departments and City functions should submit a COOP for OEM review.

## **City Plans are Still Incomplete**

While the City has made progress updating its plans, in our opinion, they remain incomplete.

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<sup>9</sup> Emergency Management City Ordinance (Sec. 38-32(c) Disaster Plan)

## Issue Details

We developed the following recommendations based upon findings identified during this engagement. According to the City Ordinance, OEM is the coordinating agency for all disaster planning and acts as the instrument through which the City Manager exercises his authority and discharges the disaster planning responsibilities. Disaster and emergency planning is a collaborative effort. As such, Internal Audit has noted the department, OEM, and/or City Management responsibilities accordingly.

City Manager, James Twombly, agrees with the Internal Audit recommendations and will work with OEM and the Departments on implementation.

The following recommendations (labeled 'ISS') are from this follow-up engagement.

### ***ISS.1 – Department Interaction – Part 2***

OEM did not address part two of the Internal Audit recommendation of setting minimum plan requirements (standardizing the planning process). OEM did not prescribe a City of Aurora customized template or establish a list of critical annexes for all departments to document within the Bold template. Eleven of the thirteen departments submitted plans for the OEM review and only five divisions submitted plans.

During our plan reviews, we noted varying ways that departments completed their plans. Many departments used the Bold system template when completing their COOP plans. Some departments documented the information for all 18 annexes (as downloaded from Bold), some only completed a portion, and some did not follow the template at all.

While each plan requires unique department/division information, the difference in the documentation format makes it very difficult to review plans for completeness or compare plans across departments to identify potential conflicts. The results can be incomplete, conflicting, or incompatible plans that decrease effectiveness. Establishing set plan criteria provides a base line against which OEM can compare plans for completeness and adequacy. Establishing consistent plan requirements can create efficiencies in review and execution.

## **Recommendation**

### **OEM:**

We recommend OEM establish minimum and critical criteria for all plans in order to ensure quality, completeness, and adequacy. The OEM may consider requiring all departments to use the Bold template, another best practice template<sup>10</sup>, or a customized City of Aurora template. We recommend that OEM determine which

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<sup>10</sup> The Federal Emergency Management Agency (FEMA) has a template for organizations to follow.

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annexes are “required” or “supplemental” based on the department’s categorization as *Life Line* or *continuing operations* for whichever template they select.

**Departments:**

We recommend each department select a COOP owner, responsible for documenting and maintaining a complete and feasible COOP, according to the template specified by OEM.

## **Management Response**

**OEM:**

Matt Chapman: OEM previously advised departments that their COOP plans should be flexible and meet their business function knowing that the different departments have business continuity issues that vary widely in an actual large scale emergency. One complaint with the previous BOLD template was that while it worked well for some departments, it was not a good template for the public safety departments. OEM agrees that a template will provide consistency when evaluating if a plan has been completed; however, a complete plan does not necessarily equate to a functional plan. OEM will continue to research and identify a uniform template that works best for the majority of departments and will train the department selected continuity planner on the use of the template and the critical criteria needed in the plan. OEM will also look at web based providers similar to BOLD in order to find the best solution for the city.

*Estimated Implementation Date:* December 31, 2019

*Issue Contributor:* Matthew Chapman

*Issue Final Approver:* James Twombly

## ***ISS.2 - Collaborative Planning***

Each department plan that IA reviewed included expectations of assistance from other departments. There is no evidence within the COOPs that these expectations were coordinated with the key players in the affected departments (Directors, IT, and continuity plan owners).

For example, some departments list an alternate work location (Annex B – Facilities) that may already be an existing department’s primary location without any written agreement signifying that the existing department has the capacity to accommodate a second work group or has agreed to do so. While there is no requirement for formal agreements for the use of other City property, the relocation of a work unit to another location should include an agreement with the affected Department to avoid potential conflicts during an emergency. Another example involves the IT department (Annex G – Vital Records). This annex includes information related to a department’s vital systems, backup location, backup schedule, and remote accessibility capabilities. Departments have expectations that they will have access to their IT applications in an emergency. As noted in the *City Progress* section of this report, IT reviewed a sampling of the plans and determined that the documented expectations are not executable within current IT resources.

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Collaborative planning efforts will facilitate a more cohesive and realistic response.

## **Recommendation**

### **OEM:**

We recommend OEM facilitate a yearly collaborative planning effort among all departments during which Directors and planners would discuss COOPs, cooperation, and shared resource requirements while also de-conflicting plans where needed.

### **Departments:**

We recommend each Department Director and assigned COOP owner ensure adequate preparation for and active participation at this yearly planning meeting.

## **Management Response**

### **OEM:**

Matt Chapman: OEM agrees to continue to hold COOP training sessions with the departments and would request a quarterly planning meeting during the year with the Department Directors to cover continuity issues as well as on-going emergency management topics. Participation in more exercises also draws out these gaps and issues. We saw this in our annual functional exercise held in November of 2018. OEM will continue to facilitate additional exercises and trainings that will identify planning gaps and weaknesses.

*Estimated Implementation Date:* June 30, 2019

*Issue Contributor:* Matthew Chapman

*Issue Final Approver:* James Twombly

## ***ISS.3 - EOC Trainings/Participants***

Some Emergency Operations Center (EOC) participants, both primary and assigned backups, inconsistently attended the monthly COOP trainings. This inconsistency exists across the board on a participant and department basis<sup>11</sup>. Internal Audit discussed this with both the OEM Manager and other OEM/EOC stakeholders.

When assigned to the EOC, OEM provides staff a training schedule and informs them of the requirement to have three people on a roster for their department to serve as backups should the primary staff not be available. OEM will usually meet with the staff members to review EOC operations and their responsibilities as a department representative.

Inconsistent attendance by both the primary and assigned backup participants requires OEM to train new participants at each workshop, which wastes time, as the regular attendees grow fatigued and frustrated from sitting through repeated

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<sup>11</sup> Based on OEM attendance tracking, Public Works, Aurora Water, Finance, and Risk Management consistently attend EOC trainings.

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information. It hinders progress, as the OEM team is not able to build consistently on prior trainings resulting in an increased risk of unprepared EOC representatives.

Since EOC participants must report during an activation, participants should:

- Have decision-making authority for the department.
- Have authority to spend financial resources on behalf of the department.
- Have a comprehensive knowledge of the department operations, resources, and capabilities.
- Have two delegated backups to ensure department representation at a full activation.
- Be sufficiently trained in the specific emergency support function (ESF).
- Be available to participate in EOC and full scale exercises.
- Be responsible for attending a minimum number of trainings per year.

OEM is developing and will report a performance measure that will track department representatives' attendance at EOC trainings.

## **Recommendation**

### **OEM:**

We recommend OEM ensure each EOC participant (primary and assigned backups) meets the minimum criteria as defined above.

### **Departments:**

We recommend that each department reevaluate their current EOC assignments to ensure their participants, primary and assigned backups, can commit to a full year assignment as an EOC representative (including reporting to each training session).

Departments should ensure that these individuals possess the necessary authority to discharge their assigned responsibilities, are assigned to their departments' DR/COOP team, and are not already assigned to any other emergency support functions.

## **Management Response**

### **OEM:**

Matt Chapman: OEM agrees with the criteria for EOC personnel. OEM is developing a performance measure for use in 2019 that tracks the department participation in the monthly EOC trainings. OEM would like to work with Department Directors to re-evaluate and identify the appropriate personnel to staff the EOC. Many cities across the country develop a training matrix for personnel at the Director, Assistant Director, and Management Staff levels related to COOP and Disaster Planning. This assists with succession planning and assists in ensuring different levels of the organization have an awareness of these critical functions. OEM will develop a matrix and provide recommendations to the City Manager.

*Estimated Implementation Date:* June 30, 2019

*Issue Contributor:* Matthew Chapman

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Issue Final Approver: James Twombly

## **ISS.4 - COOP Gap Analysis**

We do not believe that the COOP template used provided sufficient guidance for plan owners to document their plans completely and accurately.

OEM scheduled meetings with each department to discuss their existing COOP and to identify gaps and possible remedies. Internal Audit reviewed the current COOPs for documentation completeness. We attended the meeting with the Finance department, reviewed the notes from the Fleet meeting, and conducted a gap meeting with OEM on their COOP. Internal Audit identified some common gap areas (missing, outdated, or incomplete information)<sup>12</sup>.

Gaps in the COOPs hinder their execution, as they may not include current or critical information. A complete, documented plan increases the likelihood that the plan is feasible and executable.

## **Recommendation**

### **OEM:**

We recommend that OEM include detailed response guidance, regardless of the template required, to ensure each annex contains sufficient information that addresses the who, what, when, where, how, and why of their plan. (See Internal Audit suggestions in Appendix C.)

In addition, we recommend adding *reconstitution*<sup>13</sup> as a required annex as it documents the process by which a department/division will resume normal operations after the emergency/disaster has concluded.

### **Departments:**

We recommend the COOP owners adhere to the OEM provided guidance and COOP template to ensure a feasible and executable plan.

## **Management Response**

### **OEM:**

Matt Chapman: OEM agrees to select a template that works best for city departments and set standard criteria that must be included in the COOP plans. However, it is my opinion, which I believe was demonstrated with the survey data, that the continuity discussions and training are not making their way down and across the staff level of the departments. OEM spent the last year meeting with Management discussing the updates to their plans. The survey data shows the Management numbers are more favorable regarding the acknowledgement and the understanding of their plans, but the staff level data shows this is not the case throughout the organization. I believe this is a break down in training internal to

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<sup>12</sup> See Appendix C for the Internal Audit developed list of gaps, questions, and considerations. OEM will need to share this with Department Directors and plan owners.

<sup>13</sup> The Federal Emergency Management Agency (FEMA) template includes reconstitution.

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the departments. A designated continuity planner within each department will be one way to help with this issue.

*Estimated Implementation Date:* December 31, 2019

*Issue Contributor:* Matthew Chapman

*Issue Final Approver:* James Twombly

### ***ISS.5 - Separation of IT COOP Responsibilities***

The coordination between IT and OEM is significant; however, IT has not documented the City's technological needs during a disaster event. IT's ability to address their Internal Audit recommendations is dependent upon OEM and the City departments completing their department plans first. Because of this interdependency, it can appear that IT is not playing an active role in the disaster awareness and emergency preparedness efforts.

Since the department plans are not complete, IT is unable to complete their tasks. When the OEM Manager provides updates on their assigned audit recommendations to the Fire Chief or to the Deputy City Manager, it appears that IT has not done much work to address their assigned recommendations. Internal Audit and the OEM Manager agreed to separate IT's portion out of the OEM recommendations. Developing a comprehensive disaster recovery/continuing operations plan that encompasses the City's critical IT systems is a subset of the larger effort to have well documented and executable plans for all City departments.

### **Recommendation**

Internal Audit will separate the IT recommendations from the OEM/City department recommendations. This will provide a more accurate perspective related to measuring progress. This includes the following recommendations from the initial engagement:

- IT COOP Plan
  - The current IT plan is to document system priorities for the *Life Line* departments/divisions. IT will then prioritize the *continuing operations* departments accordingly. In the meantime, all departments/divisions should prepare to operate manually with no access to the application systems or City network.
- IT Coordination

### **Management Response**

IT agrees with the Internal Audit recommendation.

*Issue Owner:* Scott Newman

*Issue Final Approver:* Aleta Jeffress



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## **ISS.6 – Resolution Compliance**

Specific to emergency management activities, the City is not in compliance with the City Council Resolution No. R2004-80, adopting the National Incident Management System (NIMS) as the model for domestic incident management within the City of Aurora.

*NIMS represents a core set of doctrine, concepts, principles, terminology, and organizational processes that enables effective, efficient, and collaborative incident management. NIMS documents integrate best practices into a comprehensive framework for use by emergency management and response personnel in an all-hazards context nationwide, creating a common terminology and structure among local, state, and federal entities<sup>14</sup>.*

In order to participate in NIMS, it is necessary for entities to adhere to the standards, practices, and/or minimum criteria presented in the NIMS guidance documents. In 2004, the City Council adopted the NIMS standard as the model with which to manage City incidents but has not adopted the minimum criteria of training on the NIMS documentation and Incident Command System (ICS).

ICS is a widely applicable management system designed to enable effective, efficient incident management by integrating resources within a common organizational structure<sup>15</sup>. As outlined in the NIMS training program, the ICS courses train the personnel who assume supervisory positions during an incident. Currently, all OEM staff have obtained the ICS 100, 200, 300, 400, 700, and 800 training to manage the *Low/Type 5* to *High/Type 1* complex incidences (as defined by NIMS).

Compliance with NIMS would provide standardization, organization, and structure to the OEM and City preparation, prevention, response, and recovery efforts.

## **Recommendation**

### **City Management and OEM:**

We recommend City Management and OEM work to comply with the City Council Resolution No. R2004-80. This includes plan owners, Department Directors, Deputy City Manager's, the City Manager, and City Council receiving NIMS documentation training and, at a minimum, ICS 100, 200, 700, and 800 training in order to prepare to respond to the low complexity incidents. These ICS web-based courses are for those expected to be in a supervisory role during an incident.

### **Departments:**

Ensure the Department Director, COOP owner, and any other staff in a COOP supervisory role completes the required ICS trainings.

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<sup>14</sup> NIMS Training Program, September 2011, page 1.

([https://www.fema.gov/pdf/emergency/nims/nims\\_training\\_program.pdf](https://www.fema.gov/pdf/emergency/nims/nims_training_program.pdf))

<sup>15</sup> NIMS Frequently Asked Questions resource, page 2. (<https://www.fema.gov/nims-frequently-asked-questions#NIMS%20Refresh>)

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## Management Response

### **OEM:**

Matt Chapman: OEM agrees that NIMS training needs to occur across the city. As part of the emergency management training and exercise plan, we will put together a training matrix targeting City Management, Directors and City Council, initially. An initial training was provided to City Executive Staff on November 13, 2018. The next phase of the training will occur in the first phase of 2019. We will also identify other City staff that needs this training and work to find the appropriate class or curriculum for their respective levels of responsibility.

*Estimated Implementation Date:* December 31, 2019

*Issue Contributor:* Matthew Chapman

*Issue Final Approver:* James Twombly

## ***ISS.7 - Citywide Education and Training***

Education and training on disaster response, recovery, and business continuity topics is either insufficient<sup>16</sup> or absent at all levels of the City from City Council to City Management to staff. Discussions with OEM revealed that City Council has received no education or training.

Per discussion with the OEM Manager, there are trainings available that could educate City Council and City staff on their roles and responsibilities and how to respond during an event. More education and training at all City levels can improve topical awareness and preparation efforts towards this critical activity. With such an initiative, support at the highest levels improves the chances of success.

Office of Emergency Management City Code of Ordinance Section 38-29 - Intent (a) states, "it is the intent of the City council to ensure that the basic government functions of maintaining the public peace, health, and safety are provided and to effectively deal with any disaster that may occur within the City by ensuring the readiness and the complete and efficient utilization of all available resources".

## Recommendation

### **OEM:**

We recommend OEM work with the Human Resources learning and development team to implement web-based training for the City government participants and staff at all levels. Potential topics could include:

- Disaster mitigation
- Disaster preparedness
- Disaster/Emergency response

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<sup>16</sup> Training at the department level is insufficient or not occurring at all. There was a 14% increase in the number of managers/directors who were slightly to not at all comfortable with what to do during a COOP activation. There was a 24% drop in the number of staff who were comfortable to very comfortable. There was an increase in staff/supervisors who have not participated in a disaster drill and a small increase in managers/directors who have participated in a disaster drill. We issued the report on the survey results under a separate report.

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- Business continuity (COOP activation)
  - Recovery efforts

This effort could include developing specific curriculum based on staff's roles and responsibilities during an event with annual refreshers. We also recommend specific department COOP trainings and drills, tailored to help staff understand their roles and responsibilities before, during, and after an activation. This would also require annual refreshers.

**Departments:**

We recommend the Department Directors ensure staff complete the OEM prescribed trainings. We also recommend that Department Directors and COOP owners educate and train appropriate staff on COOP activation responsibilities.

**Management Response**

**OEM:**

Matt Chapman: OEM will contact Human Resources and discuss adding emergency management education and resources to the online learning management system. We would also like to discuss making emergency management training a requirement during new employee orientation as well as adding the training as a component of the curriculum for newly elected official orientation.

*Estimated Implementation Date:* December 31, 2019

*Issue Contributor:* Matthew Chapman

*Issue Final Approver:* James Twombly

## **Appendix A**

Below is the complete list of the 18 Bold template annexes.

- Annex A – COOP Teams and Responsibilities
- Annex B – Facilities
- Annex C – Mission-Essential Functions
- Annex D – Orders of Succession
- Annex E – Delegations of Authority
- Annex F – Alert Notification Procedures
- Annex G – Vital Records
- Annex H – Drive-away Kits
- Annex I – Communications
- Annex J – Security and Access Controls
- Annex K – Family Disaster Plan
- Annex L – Devolution
- Annex M – Testing, Training, and Exercising/Plan Maintenance (TTE)
- Annex N – Facility Evacuation
- Annex O – Contacts Roster
- Annex P – Pandemic Planning
- Annex Q – Risk Assessment
- Annex R – Risk Specific Action List

## **Appendix B**

Below are Internal Audit comments and observations made on some of the annexes from the Bold template.

### *Teams, Authority Delegations, and Succession Annexes*

Requirement: Departments must clearly document in the plans who is responsible and has authority to complete specific tasks. This information appears in various annexes in the plan but primarily in the *Teams, Authority Delegations, and Succession* annexes.

- The *Teams* annex documents the individuals that will coordinate specific response actions.
- The *Authority Delegations* annex documents who are in the line of authority to execute decisions should the Director or others in management be incapacitated.
- The *Succession* annex documents the order of succession for all key positions within the department.

Observation: The current plans do not sufficiently document the director, manager(s), supervisor(s), and/or staff responsible for implementing the actions detailed in the plans.

### *Devolution*

Requirement: When staffing levels in one or more critical areas experience a 40% reduction, a pre-identified entity supplements the department. The documented entity and pre-established agreement help to ensure departments have a plan in place to continue operations should they lose a significant portion of their work force.

Observation: Only two departments in the City have a documented devolution entity, PROS and Dispatch.

### *Facilities*

Requirement: The department/division must identify and prepare an alternate working location should the emergency event or disaster affect their primary working location.

Observation: During the initial engagement, we noted that five departments listed Tallyn's Reach as their primary alternate work facility. That has since changed. Only OEM and the Communications department currently have Tallyn's Reach documented as their alternate work facility. Many departments have identified facilities within their department as the alternate location. Others have identified ways to work remotely. We observed significant improvement from the initial engagement in this area.

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### *Essential Functions & Vital Records*

Requirement: This annex describes the critical and primary business functions for the operation of the department. It also assigns to those with decision-making authority specific duties to perform.

Observation: This annex needs the most attention. IT has determined it will prescribe which City software and systems will receive priority restoration. The priority restoration will correlate to the departments that need to resume operations most immediately following a disruption. IT believes it is important for departments to prepare to perform their critical business operations manually and to be prepared to operate under manual conditions for an extended period. Based on this prescription, the departments will need to update their plans and fashion their responses accordingly with specific manual procedures.

### *Communications & Alert Notifications*

Requirement: This section covers one of the first actions taken after a COOP activation. It requires accurate information so Directors and Managers can contact their staff and make them aware of the COOP activation and what actions to take.

Observation: Within these annexes, Internal Audit found information for staff who was no longer City employees and an absence of personal e-mails and home or cellular numbers. If Outlook or Cisco (City internet or phone) are unavailable, management needs a way to contact staff quickly and effectively in order to activate portions of the COOP. This is not a function currently configured in Everbridge (the City's emergency notification/reverse 911 system).

### *Testing & Training*

Requirement: This annex provides a historical view of the plan updates, tests, and training events.

Observation: The City is in need of more testing and training. The data that is currently in the plans is a direct pull down from what was in Bold. In some cases the last plan test, training event, or update was five years ago. The completion rate does not equate to the department having conducted a recent training (within the last year), nor does it equate to a sufficiently trained department. As we discussed in the *Survey Results* report, many staff have not participated in disaster drills.

## Appendix C

Internal Audit identified suggestions for plan owners to consider.

- Each department/division should have priority agreements with suppliers prior to an event/pre-established contracts/memorandums of understanding. This prevents price gauging and staff from scrambling for suppliers during an event.
- Each plan should remove any outdated information. This refers specifically to the following annexes: vital records, pandemic planning, file archive (this needs to be customized now that the plans are out of Bold), Testing, Training, and Exercising/Plan Maintenance (TTE), and remove any references to Denver Metro COOP (Bold system).
- Each department/division should consider where they store their plans. Whether electronic or hard copy, the plans should be accessible from anywhere, at any time (by the major stakeholders).

Internal Audit identified planning gaps and developed questions that may help the plan owners while documenting their COOPs. These gaps relate specifically to the Bold template. Should OEM prescribe a new template, these considerations (plus any others OEM identifies) will still apply.

Annex	Considerations
Annex A COOP Teams and Responsibilities:	<p>Overall:</p> <p><i>Identify what staff members are assigned to each team.</i></p> <p>Questions to answer while documenting annex:</p> <p><i>-Is there succession (designated backups) for the assigned team members?</i></p> <p><i>-Is it feasible to have a member listed to serve on multiple teams? If so, are there any circumstances under which they may be unable to serve adequately on all teams on which they are listed?</i></p> <p><i>-Do the assigned team members understand their role and responsibility?</i></p> <p><i>-Do the assigned team members have the adequate level of training to execute their team role?</i></p> <p><i>-Are the yearly meetings for each team occurring? Are they documented?</i></p>

<p>Annex B Facilities:</p>	<p>Overall:</p> <p><i>Consider establishing a second and third alternate facility for all departments/divisions.</i></p> <p><i>Establish an agreement with the alternate locations (Director or Manager) to ensure the facility has the capacity to host a secondary work group.</i></p> <p><i>If the location is an outside entity, establish a Memorandum of Understanding or other written agreement.</i></p> <p><i>Determine which staff to relocate (key staff) and which staff to reassign or temporarily relieve of duties.</i></p> <p>Questions to answer while documenting annex:</p> <ul style="list-style-type: none"> <li><i>-Where can the team relocate if the primary alternate location is also affected by the event?</i></li> <li><i>-Are there supplies/equipment that should be pre-positioned at the alternate location(s)?</i></li> <li><i>-Are there supplies/equipment that can be transported from the primary work location during evacuation?</i></li> </ul>
<p>Annex C Mission-Essential Functions:</p>	<p>Overall:</p> <p><i>Consider the critical activities that must occur in order for the business to continue operations during an event that interrupts normal operations. For some departments it may be safety of staff or City of Aurora residents. For some departments it may be safety of City property and equipment.</i></p> <p><i>Identify the staff and resources needed to execute these critical activities; consider succession for the identified staff.</i></p> <p><i>Identify any regulatory or statutory activities that must be formed or</i></p>



	<i>agencies that should be contacted should normal operations be interrupted.</i>
Annex D Orders of Succession:	<p>Overall:</p> <p><i>Consider what staff members are key and establish an appropriate order of succession.</i></p> <p><i>Reconsider having the same person listed in the order of succession for multiple positions/assignments.</i></p> <p><i>Ensure staff members receive proper training to execute responsibilities.</i></p>
Annex E Delegations of Authority:	<p>Overall:</p> <p><i>Consider what staff members are key and establish an appropriate order of succession.</i></p> <p><i>Reconsider having the same person listed in the order of succession for multiple positions/assignments.</i></p> <p><i>Ensure staff members receive proper training to execute responsibilities.</i></p> <p><i>Consider combining documentation with Annex D.</i></p>
Annex F Alert Notification Procedures:	<p>Overall:</p> <p><i>Consider adding personal cell phones and e-mail addresses (not currently listed) in case Outlook or Cisco telephones not available or if the event occurs outside of normal business hours.</i></p>
Annex G Vital Records:	<p>No considerations or questions for this section.</p> <p>Note: IT will begin to document this section for priority departments and systems. However, departments/divisions should prepare to operate manually with no access to the application systems or City network. (See ISS.5)</p>
Annex H Drive-Away Kits:	<p>Overall:</p> <p><i>Consider what mission critical forms, documents, supplies, and/or equipment</i></p>

	<p><i>should be kept and maintained in drive-away kits. Document the supplies on the list, along with the specific quantities needed to sustain during an event.</i></p> <p><i>Consider the location of the kits.</i></p> <p><i>Kits may need to be located in key staffs' vehicles/homes or at the alternate work location (not at primary work location)</i></p> <p><i>Consider a frequency with which to refresh and audit the kits.</i></p> <p><i>The drive away kits should include the materials needed to operate the business manually. The kits are not necessarily for staff 'survival' (i.e. hygiene items, food, clothing, etc.).</i></p>
Annex I Communications:	<p>Overall:</p> <p><i>Consider and plan for circumstances when there is no cellular or e-mail access.</i></p>
Annex J Security and Access Controls:	<p>Overall:</p> <p><i>Consider who has access to the list of controls and who can execute changes to the plan.</i></p> <p><i>Consider how quickly access can be granted at alternate locations.</i></p> <p><i>Consider cybersecurity and security of sharing information via e-mail or phone during an event. If the City systems are compromised, consider how to limit the sensitive information shared through the network.</i></p>
Annex K Family Disaster Plan:	<p>Overall:</p> <p><i>Consider sharing the information in this annex with all staff members. If staff family members are safe, staff will more likely be available to assist the City during an event.</i></p>

Annex L Devolution:	<p>Overall:</p> <p><i>Consider establishing agreements with organizations/companies that can supplement the department/division staffing in advance of an event.</i></p> <p><i>Currently, most plans have not identified an organization or company.</i></p> <p><i>Consider what areas of the business can be supplemented as there may be restrictions on what information can be shared with outside entities.</i></p>
Annex M Testing, Training, and Exercising/Plan Maintenance:	No considerations or questions for this section.
Annex N Facility Evacuation:	<p>Overall:</p> <p><i>Consider documenting the plan to evacuate safely all primary and alternate location facilities.</i></p> <p><i>Consider the likely events that would force an evacuation.</i></p>
Annex O Contacts Roster:	<p>Overall:</p> <p><i>Consider adding personal cell phones and e-mail addresses (not currently listed) in case Outlook or Cisco telephones not available.</i></p>
Annex P Pandemic Planning:	<p>Overall:</p> <p><i>Identify the staff assigned to the pandemic response team.</i></p> <p><i>Ensure staff receives training on roles and responsibilities.</i></p>
Annex Q Risk Assessment:	<p>Overall:</p> <p><i>Consider which events are universal (affecting all City staff/City of Aurora) and which events would only affect certain departments (see annex R) and document accordingly.</i></p>
Annex R Risk Specific Action List:	Overall:

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	<p><i>Consider documenting events that would only affect a specific department/division (Dispatch and PROS are good high-level examples).</i></p> <p><i>Document response and plan for the likely events, assigning staff and resources to the response teams appropriately.</i></p>
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