



# Metro

Office of the Auditor

## Emergency Management Follow-Up

*Angela Owens*  
Principal Management Auditor

*Elliot Shuford*  
Senior Management Auditor

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### SUMMARY

Metro made progress on implementing most of the recommendations from the 2018 audit **Emergency Management: Strengthen basic elements to prepare for disasters**. Of the seven recommendations, six were in process and one was not implemented. Continued implementation of the recommendations will be important for Metro to clarify expectations and manage risk during and after emergencies.

Based on our review of Metro's response to Covid-19 and the 2020 wildfires, prioritizing recommendations related to roles and responsibilities would better prepare Metro for responding to emergencies. Prioritizing recommendations for continuity planning would better prepare Metro to manage risks other than those related to health and safety as it recovers from emergencies.

### BRIAN EVANS

#### Metro Auditor

600 NE Grand Avenue  
Portland, OR 97232  
503-797-1892

[www.oregonmetro.gov/auditor](http://www.oregonmetro.gov/auditor)

### BACKGROUND

Emergency management is an approach used to deal with emergencies and disasters. Oregon law requires counties to have dedicated emergency managers and programs. Other jurisdictions such as Metro are allowed to develop programs according to their needs.

Emergencies are managed in phases. Models vary, but typically include preparedness, mitigation, response, and recovery. Preparedness includes planning, training, and exercising plans to strengthen an organization's capabilities. Mitigation includes actions taken to reduce impacts when disasters happen, such as retrofitting buildings to better withstand earthquakes. Response is focused on safety and includes actions to save lives and prevent further damage. Finally, recovery includes actions taken to return to normal or safer operations.

The 2018 audit of emergency management focused mostly on the preparedness phase and found that Metro had not developed a program or formal structure to respond to emergencies for the agency as a whole. Instead, Metro took an ad hoc approach to manage four emergencies we reviewed. This meant that Metro relied mostly on employee initiative and experience. As a result, Metro was more vulnerable to larger emergencies affecting the entire agency. We made seven recommendations for Metro to clarify and strengthen roles, responsibilities, and authority.

We designed this follow-up audit to connect previous audit recommendations to the real-world emergency response and recovery efforts caused by Covid-19 and the wildfires of September 2020. This approach allowed us to help Metro prioritize additional efforts needed to implement the 2018 audit recommendations and identify lessons learned while responding to a global pandemic. In particular, we focused on the use of Metro's facilities during emergencies. We also looked at the effect of changes to business processes resulting from the need to respond to the health and safety risks associated with Covid-19. The intent was to evaluate whether additional changes were needed as the agency moved closer to the recovery phase of emergency management.

Covid-19 restrictions required closure of Metro's venues for normal business and widespread layoffs for those lines of business. Other departments changed operations and employees were required to work from home when possible. Widespread fires also affected the region. Metro operations were affected directly by smoke and Metro's venues were used as an emergency fire shelter and a staging area for relief supplies.

## RESULTS

Although Metro made progress on most of the recommendations from the 2018 audit, more work was needed to clarify roles and manage risk. Specifically, Metro's regional role remained unclear, and more work was needed to clarify roles internally. Unclear roles can lead to confusion and make it difficult to assign appropriate resources for emergency preparedness.

Metro put several processes in place to minimize health and safety risk during Covid-19. This was in line with best practices. However, it increased the chance for other risks, such as financial, reputational, or reporting risks, to be accepted during emergency response. Lack of department-level continuity planning and limitations in agency-wide processes reduced Metro's ability to proactively manage non-health and safety risks as emergency response transitioned to recovery. This matters because emergencies can weaken controls and exacerbate existing control weaknesses.

While we observed that Metro's response was based on best practices, each emergency is different. Prioritizing recommendations related to roles and continuity planning will better prepare Metro for responding to and recovering from future emergencies. In particular, finalizing the emergency operations plan and developing continuity plans would provide more clarity about emergency roles and authority. Structured training and exercises on these plans can provide assurance that the agency is as prepared as possible for the next emergency.

### Metro made progress on most recommendations from the 2018 audit

Nearly all of the seven recommendations from the 2018 audit were in process. This was reasonable given the amount of time since the original audit. Metro's first emergency manager was hired only three months before the onset of Covid-19. Additionally, progress on several of the recommendations indicated Metro was on track for full implementation.

For instance, the original audit found there was confusion about what regional roles Metro would play during emergencies. Metro developed a plan for managing disaster debris for the region, but it was incomplete. Our follow-up work found that Metro started, and had plans to finish, the appendices for the disaster debris management plan and to specify any additional roles.

The 2018 audit found that Metro took an ad hoc approach to manage emergencies. Our follow-up work found that Metro implemented the National Incident Management System (NIMS), which includes the Incident Command System (ICS). These systems create a standardized structure to manage emergencies and help with coordination and decision-making. Metro drafted an emergency operations plan (emergency plan) and developed some administrative procedures. Metro also provided some training for emergency management and had plans to conduct more in the future.

Metro had not developed an inventory for emergency resources. This meant finding some resources during an emergency, such as chainsaws, could be

delayed. People we spoke to expressed concern about how difficult and costly it is to maintain such an inventory.

We noted progress in developing a continuity of operations plan (continuity plan) for the agency. The 2018 audit found that no such plan was in place and Metro was at risk of having to make critical resource decisions during a time of stress. Since that time, Metro finished a continuity plan for solid waste, but had not yet developed an agency-wide continuity plan. During Covid-19, departments made progress by identifying essential functions and employees. However, we noted the scope of what was considered an essential function was inconsistent and functions were not prioritized across the agency.

Communication is critical in an emergency. The 2018 audit found gaps in agency-wide communication technology. During our current work, we found that Metro recently instituted an emergency telephone number that employees can call to find information about things such as facility closures. Metro did not have a notification system to reach all employees or a back-up communication system. This leaves it more vulnerable in the case of a major disaster with more physical impacts, such as an earthquake.

Since the prior audit, Metro moved the emergency management function to a new department with agency-wide responsibility and hired an emergency manager. This position was tasked with preparing Metro for emergencies. That position was filled only a few months before Covid-19 interrupted Metro operations. Once that happened, the position's focus was largely on emergency response.

**Exhibit 1 Status of Recommendations**

2018 Audit Recommendations	Status
<p><b>To strengthen its regional role during a disaster,</b></p> <ol style="list-style-type: none"> <li>1. Metro should complete appendices outlined in the Disaster Debris Management Plan</li> <li>2. Metro should specify what, if any additional roles Metro intends to fulfil during a disaster</li> </ol>	<p><b>In process</b></p> <p><b>In process</b></p>
<p><b>To prepare for severe emergencies and disasters,</b></p> <ol style="list-style-type: none"> <li>3. Metro should clarify roles, responsibilities and authority by:               <ol style="list-style-type: none"> <li>a) determining which elements of NIMS, including ICS, it will use and formally adopt them</li> <li>b) formally approving an agency-wide emergency operations plan</li> <li>c) assigning responsibility to specific position(s) for maintaining the emergency operations plan and procedures</li> <li>d) providing training and exercises for the employees who will be involved in response and recovery operations</li> </ol> </li> <li>4. Metro should formalize emergency procedures by developing written agency-wide procedures, at a minimum, for:               <ol style="list-style-type: none"> <li>a) tracking and reporting emergency-related damage and costs</li> <li>b) manual payroll and vendor payment processes for when normal systems are unavailable</li> </ol> </li> <li>5. Metro should maintain an up-to-date inventory of emergency resources</li> <li>6. Metro should plan for continuity of operations by:               <ol style="list-style-type: none"> <li>a) finishing current continuity planning efforts for solid waste and supporting functions</li> <li>b) planning for other essential and remaining agency functions</li> </ol> </li> <li>7. Metro should improve emergency communication by:               <ol style="list-style-type: none"> <li>a) developing a back up emergency communications system</li> <li>b) implementing a notification system(s) that reaches all Metro employees</li> </ol> </li> </ol>	<p><b>In process</b></p> <p>(Implemented)</p> <p>(In process)</p> <p>(Implemented)</p> <p>(In process)</p> <p><b>In process</b></p> <p>(In process)</p> <p>(In process)</p> <p><b>Not implemented</b></p> <p><b>In process</b></p> <p>(Implemented)</p> <p>(In process)</p> <p><b>In process</b></p> <p>(In process)</p> <p>(In process)</p>

*Source: Auditor's Office analysis of emergency management documents and interviews*

## Metro’s response to recent emergencies was based on best practices

Despite previous audit recommendations not being fully implemented, Metro put into place best practices to respond to a series of emergencies over the past year. For example, Metro used ICS to manage wildfires and Covid-19. ICS is a tool to help coordinate during an emergency. Interviews suggested there was strong coordination in these efforts. Metro addressed community needs by making its facilities available for things such as vaccine clinics and shelters.

### Exhibit 2 Metro’s response to Covid-19 included hosting a vaccine clinic in the Oregon Convention Center



Source: Oregon Metro website

Additionally, Metro put into place formal agency-wide processes for emergency response and recovery. These could be replicated in the future. These processes prioritized health and safety during Covid-19 and included a risk assessment process, the identification of essential employees, and a policy development and review process. The risk assessment process encouraged discussion about various risks and mitigation, such as the need for additional signage to reduce health and safety risks.

### Exhibit 3 Sign at the Oregon Zoo encouraged guests to think about safety



Source: Oregon Zoo

**Formalize and exercise plans to establish roles and authority, clarify expectations and reduce confusion**

Although these practices were in place, several people we spoke with noted that much of Metro’s success was because the right people were in place at the right time. This is similar to what we found in the 2018 audit and suggests Metro may still be overly reliant on employee experience and initiative to manage emergencies. Relying too much on a few employees can create challenges for Metro if they become injured or are otherwise unavailable during an emergency. It can also create employee burnout.

We found that clarifying expectations about some emergency management roles and processes would better prepare Metro for future emergencies. When expectations for the roles people and organizations play in an emergency are not clear, there is the potential for confusion, delays, and increased stress. For instance, some people reported confusion about the process for approving information Metro made available to the public. In other cases, people reported that authority for making decisions was not clear to them.

Finalizing the emergency plan, developing an agency-wide continuity plan, and then structuring training and exercises on those plans would provide more clarity for emergency roles and authority. Because each emergency is different, effective emergency management requires both planning and flexibility. Further development of plans and training will allow Metro to manage these tradeoffs.

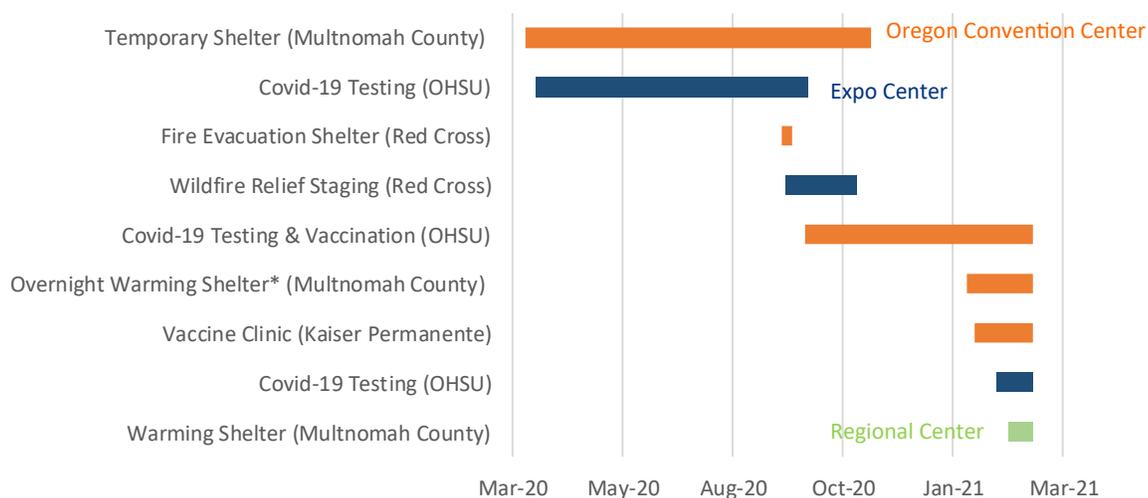
Metro’s regional roles beyond disaster debris management remain unclear. The 2018 audit found there was not a shared understanding about what Metro’s role in the region would be following a disaster. Some believed solid waste and disaster debris were the only things Metro would be responsible for. Some thought Metro would provide its facilities for uses such as mass sheltering or lend out employees to other jurisdictions.

An early draft of the emergency plan outlined three roles for Metro: safety for staff and the public, protecting assets and animals, and debris management. However, the latest version omitted this specific description of regional roles. Metro leadership said regional roles had not been settled.

Expectations for how Metro will manage disaster debris continued to be a question as well. Metro had completed the Disaster Debris Management Plan. However, much of the detail about how those operations will be carried out, like procedures for managing a debris-generating emergency, had not been finalized. That information was contained in the appendices. Some of this may be clarified as Metro develops intergovernmental agreements with neighboring jurisdictions. We were told this work had been assigned and was being scoped. However, reaching agreements with multiple parties may be a challenge given the complexities of debris management and the federal process to reimburse local costs for disasters.

Metro facilities were also available for partners to carry out regional roles in ways that were unexpected. The Oregon Convention Center (OCC) and Expo Center were used for the state’s largest vaccination clinic, testing centers, and shelters. Expo was used to stage first aid relief supplies for the wildfires and the parking garage at the Regional Center was briefly used as an outdoor shelter during cold weather.

## Exhibit 4 Metro facilities were used by partners to meet a variety of regional needs<sup>^</sup>



Source: Auditor's Office analysis of facility license agreements and facility documentation

<sup>^</sup> As of February 2021

\*Agreement was amended so space could be used as a vaccine clinic in the absence of extreme weather

While most venue employees we spoke with thought roles and authority were clear, we noted there was a lack of clarity about some roles and internal processes in a few cases. For instance, there was confusion about the process to approve information before posting it online, despite Metro having named a Public Information Officer (PIO) within its ICS framework. The PIO is assigned during the emergency and responsible for developing and releasing related information. This may look different than communication processes during normal operations. Clarifying the Communications department responsibilities in the emergency plan and outlining a procedure for the PIO to approve information would likely help alleviate this confusion in the future.

Some staff also reported that authority for making certain decisions about venues was not clear. The emergency plan stated that a written delegation of authority will be made from the Chief Operating Officer (COO) to the Emergency Manager. In this situation, the delegation was made verbally. Using written delegations in the future may help clarify what authority the Emergency Manager has or does not have.

Also, while the emergency plan outlined a process for Metro to request assistance, it did not outline who is responsible for making final decisions about requests coming in from other jurisdictions or partners. Covid-19 was a unique emergency because the venues were needed and they were not being used for normal operations. In the future, however, there may be a tension between the business needs of the venues and regional needs for things such as shelter. While decisions about resources in an emergency are

likely to be made on a case-by-case basis, describing who makes the final decision or how it should be made could save time.

Metro developed agreements with different organizations for the emergency uses of the venues and the Regional Center. Generally, these agreements helped minimize risk for Metro. For instance, employee health and safety was ensured because the agreements specified the limited circumstances where Metro employees would interact with the public being sheltered or vaccinated. Metro was also able to recoup about \$2.7 million in direct costs for the use of the venues.

While agreements were developed for almost all of the emergency facility uses, one was not signed for the Red Cross' use of the OCC as a fire shelter. This may have been due to the fact that Metro received very little notice prior to that use. However, during the 2018 audit, Metro had a Memorandum of Understanding and other documentation about how the OCC would be used by the Red Cross as an emergency shelter. Revisiting how Metro intends to work with the Red Cross and other partners may help parties be better prepared if or when the need for a future shelter arises.

Covid-19 was also a unique emergency in other ways that presented challenges for Metro's preparedness. Covid-19 was primarily a long-term interruption to normal business. The emergency plan does not address how continuity will be maintained, but expects that Metro will continue to conduct its business. Metro had not developed a continuity plan. Departments developed 'mini' continuity plans outlining essential functions and employees, but it was not clear how departments should balance normal operations with emergency responsibilities.

Training and exercises would help implement the emergency and continuity plans. Some on-the-job training was reported to be conducted, but more was planned. Training during non-emergencies helps familiarize people with their roles. Conducting exercises also helps identify assumptions about roles and authority, and provides an opportunity to practice making difficult decisions without the pressure of a real emergency. Training and exercises can also help identify where more or fewer resources are needed. After-action reports are another way to help Metro learn from exercises and emergencies and identify areas for improvement.

### **Address process limitations to manage risk as emergencies move between phases**

Processes put into place during Covid-19 prioritized health and safety risks, but were limited in managing other risks. Specifically, we noted opportunities for improvement in Metro's Covid-19 risk assessment process, the identification of essential employees, and the policy development and revision processes. These limitations reduced Metro's ability to manage emergencies as they moved between phases.

We reviewed three activities at a high level to evaluate potential effects of these limitations. Some of them were addressed through employee initiative and experience. However, we did see examples of confusion, reporting delays, and personnel time lost.

Managing emergencies requires changes that are intended to prioritize health and safety and the continuity of essential operations. This reduces capacity to focus on other types of risk during the emergency, such as financial, reputational, or reporting risks. At the same time, these risks could increase because of the emergency. This is because reduced staffing and process changes can weaken the activities in place to manage risk (controls) and exacerbate existing control weaknesses. For instance, segregation of duties is a key control to reduce fraud and abuse by making sure no single person has the ability to carry out a process from beginning to end. Emergencies may result in reduced staffing, which can create challenges in ensuring proper segregation of duties.

Best practices emphasize the importance of reassessing risks after changes are made to ensure controls are operating effectively. In continuity planning, this can be done ahead of time through business process and impact analyses. Building reevaluation points into existing processes could be one way to address these limitations. Department-level continuity planning is another way.

**Exhibit 5 There were several strengths and some limitations in the processes Metro developed to respond to Covid-19**

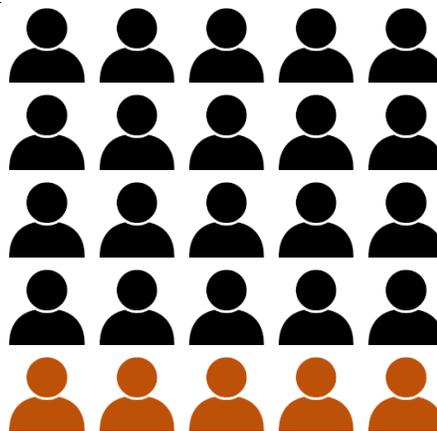
<b>Process</b>	<b>Strengths</b>	<b>Limitations</b>
Risk Assessment Process	<ul style="list-style-type: none"> <li>• Prioritized health and safety</li> <li>• Formal, repeatable process</li> <li>• Encouraged coordination among various subject-matter experts</li> </ul>	<ul style="list-style-type: none"> <li>• Did not apply to all operational changes</li> <li>• Prompts in the risk mitigation and assessment forms could be inconsistently interpreted</li> </ul>
Identification of Essential Employees	<ul style="list-style-type: none"> <li>• Identified employees that were needed to continue operations during Covid-19</li> <li>• Prioritized health and safety</li> <li>• Formal, repeatable process</li> </ul>	<ul style="list-style-type: none"> <li>• Encouraged, but did not require, consideration of risks and potential mitigation in the assignment of essential functions</li> </ul>
Policy Development and Review Process	<ul style="list-style-type: none"> <li>• Prioritized health and safety</li> <li>• Formal, repeatable process</li> <li>• Encouraged coordination among various subject-matter experts</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps could reduce attention to risks not related to health and safety</li> </ul>

*Source: Auditor's Office analysis of Metro processes and best practices in emergency management, risk management, and internal controls.*

We identified two limitations in the risk assessment process. First, it was limited to activities that continued or increased person-to-person contact. As a result, some operational changes were not subject to this process and therefore less likely to receive the same level of scrutiny.

For example, Financial and Regulatory Services (FRS) modified purchasing card (P-Card) procedures to respond to Covid-19. Although modifications were minor, in some instances they led to confusion and missing monthly reports. Specifically, about 20% of Metro P-card holders had challenges in complying with P-Card reporting requirements between July 2020 and February 2021. P-Card users were required to electronically submit purchase receipts. The value of missing reports was about \$136,000, which was 10% of purchases made during that time. This was comparatively low because P-Card spending dropped during Covid-19. A risk assessment process similar to the one Metro developed for Covid-19 may have encouraged a reevaluation after the change took place to ensure it was having the desired effect.

**Exhibit 6 Noncompliance for P-Card reporting was about 20%**



*Source: Auditor's Office analysis of Metro documents and Bank of America data*

The second limitation was that discussion prompts were not detailed enough to ensure some risks would be consistently considered. For example, one form encouraged connecting with Information Services (IS), Human Resources, and Communications, but did not require it or indicate why it would be needed. Perspective from these departments could help Metro consider technology, personnel or reputational risks. Although evidence suggested these conversations were taking place, additional detail or requirements in the prompts would help ensure these types of conversations occur.

The identification of essential service and employees also had limitations. Metro developed guidance for thinking about essential functions and encouraged consideration of how the absence of the function would have a financial, revenue, legal or regulatory implication. This was not required, nor was it built into the templates used in designating essential functions. More effective guidance could require asking those questions about all functions

and include consideration of controls such as segregation of duties and oversight.

For example, reduction in staffing and in-person activities can reduce capacity for project management oversight. Metro's Construction Project Management office considered this risk and developed a mitigation strategy for responding to it. Building these types of considerations into processes or templates can ensure they are made consistently across the agency as the response to the emergency evolves.

Ensuring adequate segregation of duties during an emergency may be a challenge because fewer employees are available to carry out a process. In some cases, this risk can be reduced with additional controls, such as supervisory reviews. But these too, can be impacted by reduced staffing. Considerations such as these may have been made when assigning essential functions, but they were not documented.

Control weaknesses during normal operations may also be exacerbated during emergencies. For example, our Office's prior work identified challenges with how Metro ensured segregation of duties. We observed continued weaknesses during this audit. Specifically, access reviews took place for some of Metro's information and financial systems, but not all. Training and guidance was insufficient for employees to make informed decisions, and procedures were not comprehensive enough to ensure proper segregation of duties. Coordination between subject-matter experts in IS, FRS, and the employees responsible for carrying out the procedure is needed for the process to be effective. Planning for how to mitigate additional control risks prior to an emergency may benefit Metro, as this level of coordination may not be possible during emergencies.

Lastly, we noticed a gap in the policy development and review process that could reduce attention to financial or technology risks. We found the development and revision of agency-wide policies for Covid-19 was coordinated across Metro staff and subject-matter experts. However, the documented process for revisions did not require involvement of IS and FRS. This reduced the potential for review by someone who could provide perspective about financial or technology risks.

## SCOPE & METHODOLOGY

The purpose of this audit was to assess the current status of Metro's emergency management efforts. We had two objectives:

1. Determine the status of recommendations from the 2018 audit Emergency Management: Strengthen basic elements to prepare for disasters.
2. Identify opportunities for Metro to strengthen emergency management based on learnings from recent incidents.

The audit scope included activities carried out since the initial audit was released in October, 2018. To learn from recent incidents, we focused on Metro's response to Covid-19 and the 2020 wildfires.

To carry out the first objective, we interviewed Metro employees involved in aspects of emergency management. This included Metro leadership, department directors, and Metro employees. We reviewed drafts of Metro's Emergency Operations Plan, work products related to Metro's role in disaster debris, and continuity planning efforts for Metro's waste management operations.

To carry out the second objective, we reviewed agreements and information about the emergency uses of Metro facilities and other emergency management documents including situation reports. We also interviewed employees involved in the emergency facility uses.

We reviewed three agency-wide processes Metro developed in response to Covid-19 and evaluated them against risk management and internal control best practices to identify limitations. We reviewed controls related to P-Cards, project management oversight, and segregation of duties to understand the potential impacts of these limitations. This included conducting additional employee interviews and assessment of documents. We also conducted user walk-throughs of Metro's P-Card process and analyzed purchasing card data obtained from Bank of America and Metro staff.

This audit was included in the FY 2020-21 audit schedule. 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.

## MANAGEMENT RESPONSE

### **Recommendation 1:**

To strengthen its regional role during a disaster, Metro should: Complete appendices outlined in the Disaster Debris Management Plan.

#### RESPONSE:

**In process.** A contract was initiated to work on nine appendices at the start of COVID-19 in March 2020. The work was put on hold around June 2020 due to emergency management staff workloads for COVID-19 response and the disaster debris planner left Metro. The disaster debris planner position, retitled emergency management planner, was refilled in August 2021. Some appendices will be developed or revised based on lessons learned from participation in Cascadia Rising June 2022 and Cascadia Receding (Recovery exercise) in November 2022. Therefore, expected completion is early 2023.

### **Recommendation 2:**

To strengthen its regional role during a disaster, Metro should: Specify what, if any, additional roles Metro intends to fulfill during a disaster.

#### RESPONSE:

**In process.** The Metro Emergency Operations Plan is complete and in graphic design prior to publication. Additional Metro roles during disaster response will need to be identified and clarified which will include thorough engagement with stakeholders. This work will resume once the COVID-19 response is significantly reduced.

### **Recommendation 3a:**

To prepare for severe emergencies and disasters, Metro should: Clarify roles, responsibilities, and authority by: Determining which elements of NIMS, including ICS, it will use and formally adopt them.

#### RESPONSE:

**Implemented.** Metro Council formally adopted the National Incident Management System (NIMS) and Incident Command System (ICS) in December 2020 with Resolution 20-5139.

### **Recommendation 3b:**

To prepare for severe emergencies and disasters, Metro should: Clarify roles, responsibilities, and authority by: Formally approving an agency-wide emergency operations plan.

#### RESPONSE:

**In process.** The draft plan is complete and in graphic design awaiting publication.

### **Recommendation 3c:**

To prepare for severe emergencies and disasters, Metro should: Clarify roles, responsibilities, and authority by: Assigning responsibility to specific position(s) for maintaining the emergency

operations plan and procedures.

**RESPONSE:**

**Implemented.** The Emergency Manager is responsible for maintaining the emergency operations plan and procedures, and assigning roles and responsibilities.

**Recommendation 3d:**

To prepare for severe emergencies and disasters, Metro should: Clarify roles, responsibilities, and authority by: Providing training and exercises for the employees who will be involved in response and recovery operations.

**RESPONSE:**

**In process.** This recommendation is ongoing. Metro will participate in the June 2022 Cascadia Rising exercise. Exercise planning has started. It is also important to note that Metro has had to deal with a number of smaller emergencies during 2020 and 2021 that have allowed us to exercise our capabilities e.g. wild fires/toxic air quality (Sept/Oct 2020); major ice storm with associated organic debris (Feb 2021) and major heat event (summer 2021).

**Recommendation 4a:**

Formalize emergency procedures by developing written agency-wide procedures, at a minimum, for: Tracking and reporting emergency-related damage and costs.

**RESPONSE:**

**In process:** Finance and Regulatory Services has made progress in tracking and reporting emergency-related damage and costs during the COVID-19 pandemic, but is still working on formalizing those procedures.

**Recommendation 4b:**

Formalize emergency procedures by developing written agency-wide procedures, at a minimum, for: Manual payroll and vendor payment processes for when normal systems are unavailable.

**RESPONSE:**

**In process:** This recommendation is still in process. Significant progress has been made during the pandemic to build additional resilience into payroll and vendor payment processes, but staff shortages and ongoing pandemic response have limited the ability of the department to complete this project at this time.

**Recommendation 5:**

Maintain an up-to-date inventory of emergency resources.

**RESPONSE:**

**In process.** Generally, emergency resource inventories are costly to develop and impractical to maintain. The 2030 Regional Waste Plan identifies a resource inventory as a goal. The regional solid waste disaster preparedness group will explore whether it is practical to inventory some expensive, unique equipment.

**Recommendation 6a:**

Plan for continuity of operations by: Finishing current continuity planning efforts for solid waste and supporting functions.

**RESPONSE:**

**Implemented.** The solid waste facilities' continuity of operations plan is complete and published and has proved useful during a number of smaller emergencies that required facility closure or evacuation.

**Recommendation 6b:**

Plan for continuity of operations by: Planning for other essential and remaining agency functions.

**RESPONSE:**

**In process:** Metro leadership recognizes the importance of Continuity of Operations planning. Continuity of operations planning will begin with each department identifying their essential functions and employees. More detailed continuity of operations planning can only occur once the COVID-19 response has significantly reduced.

**Recommendation 7a:**

Improve emergency communication by: Developing a back-up emergency communications system.

**RESPONSE:**

**In process:** While Metro leadership recognizes the importance of back-up emergency communication systems, these are typically over \$1 million dollars and often rely on the same geographical locations as primary communications systems. Recent disasters, especially Hurricane Ida in New Orleans during August and September 2021, highlight the increased resilience of cellular communications from disruption. This indicates a reduced need for back up communication mechanisms. Metro will explore a few satellite phones for key leaders as budget allows.

**Recommendation 7b:**

Improve emergency communication by: Implementing a notification system(s) that reaches all Metro employees.

**RESPONSE:**

**Complete.** Emergency notification systems are expensive and require at least .30 FTE to maintain and manage the system. IS and the Emergency Management program explored a notification system and decided it was not cost effective based on current business needs. However, a phone line and associated procedures were created in which employees can call and get closure information.