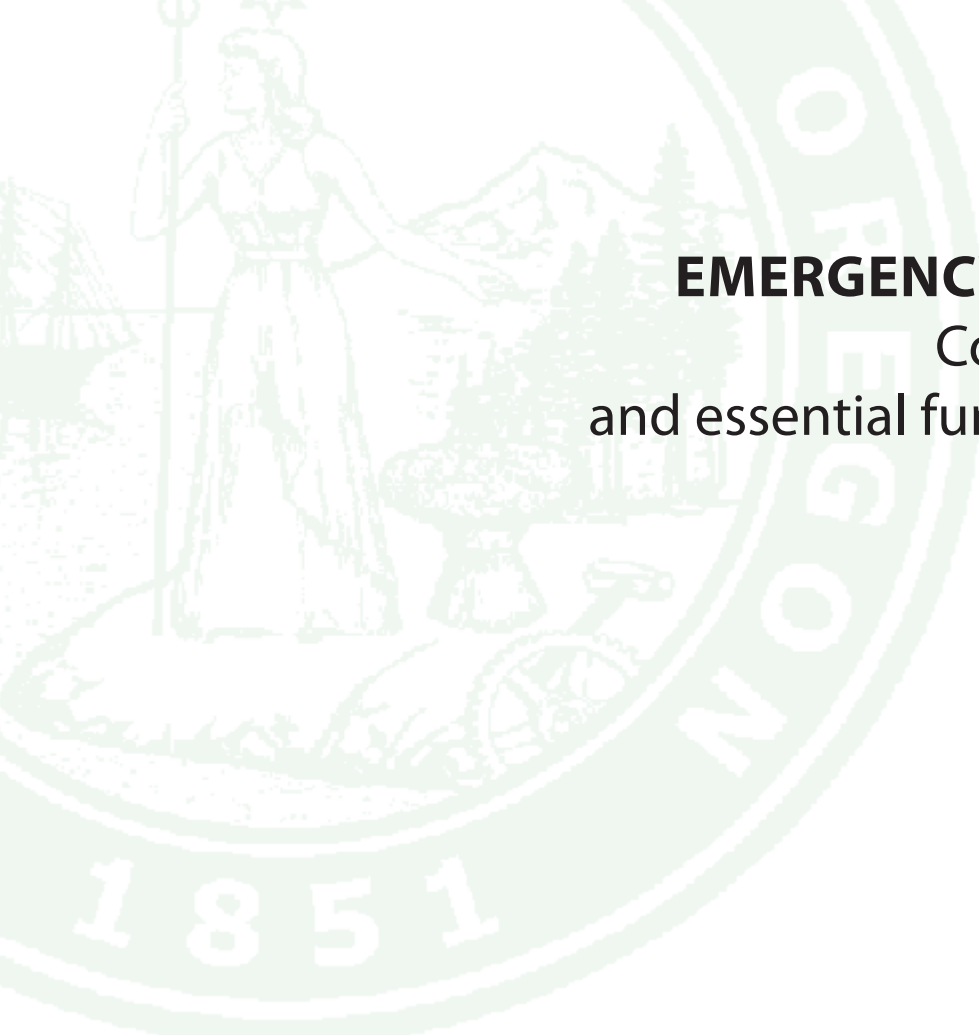




EMERGENCY MANAGEMENT:

Coordination limited
and essential functions incomplete

May 2010

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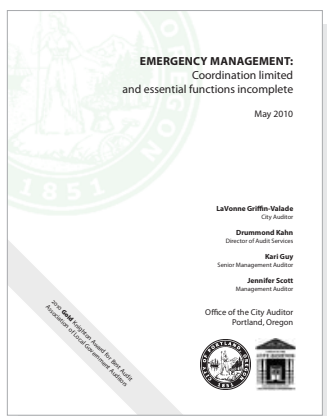
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2010 **Gold** Knighton Award for Best Audit
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May 24, 2010

TO: Mayor Sam Adams
Commissioner Nick Fish
Commissioner Amanda Fritz
Commissioner Randy Leonard
Commissioner Dan Saltzman
Carmen Merlo, Director, Portland Office of Emergency Management

SUBJECT: Emergency Management: Coordination limited and essential functions incomplete (Report #389)

The attached report contains the results of our audit of the Portland Office of Emergency Management (POEM). POEM was created in 2003 to coordinate the City's emergency management activities. We found that the emergency management system lacks both a clear definition of roles and the strategic planning needed to focus limited resources on the highest priority risks. We also determined that many essential emergency preparedness activities are incomplete. However, POEM has made recent progress in some areas, including clarifying and defining operations at the City's emergency coordination center.

I recognize that it can be difficult to maintain focus on preparing for an unknown emergency in the face of other pressing City needs. The audit recommends that the Mayor and POEM begin by clarifying emergency management responsibilities and developing a multi-year plan based on an assessment of highest priority risks. With those actions completed, Portland will be better positioned to complete the plans, training, and public outreach needed to prepare City government and residents to respond to a disaster. We ask that the Mayor provide us with a status report within one year detailing actions taken to implement the audit recommendations.

The Director of the Portland Office of Emergency Management requested this audit, and has committed to implementing the audit recommendations. We appreciate the cooperation and assistance we received from management and staff at POEM. We also appreciate the insights and commitment to emergency preparedness we found in management and staff at many other City bureaus and offices, including Fire, Police, Emergency Communications, Water, Transportation, Environmental Services, Parks, Technology Services, and Risk Management.

LaVonne Griffin-Valade
City Auditor

Audit Team: Drummond Kahn
Kari Guy
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Attachment

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Summary

In a disaster such as an earthquake, flood, or major fire in Portland, multiple City bureaus must work together in order to maintain safety and City operations. For example, the Fire Bureau relies on the Water Bureau to keep the water flowing to fire hydrants, and on the Bureau of Transportation to clear debris and block off streets. The Police Bureau provides traffic and crowd control, and the Bureau of Parks and Recreation may offer evacuation sites. Each bureau knows and carries out its individual role, but it is the responsibility of the Portland Office of Emergency Management (POEM) to orchestrate these individual roles into a coordinated response. An effective response during a disaster requires coordination of emergency preparation efforts long before a disaster occurs.

POEM management has made recent progress in emergency preparation by implementing specific emergency management projects, and clarifying the role of an Emergency Coordination Center. POEM management requested this audit to assess the current emergency management program.

POEM's mission to provide comprehensive emergency planning and preparation is lacking for two reasons. First, POEM and the City's emergency response bureaus do not have a clear definition of roles, a structure to ensure effective oversight of emergency management activities, or a strategic plan to focus the City's emergency preparations on the highest priority risks.

Second, POEM has not effectively coordinated implementation of many of the essential functions of a well-orchestrated emergency

management program, including assessing risk, making plans, practicing responses and training employees. For example:

- The City's basic emergency operations plan is outdated, with less than a quarter of the required sub-plans complete.
- Emergency responder training and disaster drills are infrequent, with little or no follow-up to correct identified shortcomings in the City's ability to respond to a disaster.
- Public education efforts are disjointed and lack a consistent message, and there are no written plans to ensure timely and accurate information reaches all segments of Portland's population during an emergency.

We reviewed a draft of this report with POEM management, who generally agreed with our findings and recommendations. POEM management cautioned, however, that their direct authority is limited, and emergency management bureaus hold responsibility for specific emergency management activities. While we agree that POEM lacks specific authority to compel bureaus to conduct emergency management activities, we found that the lack of effective coordination by POEM is one cause of the current shortcomings in the City's emergency management program.

To improve oversight and coordination of emergency management, we recommend that the Mayor and POEM clarify POEM's role and responsibilities, document the emergency management governance, and complete a strategic plan to guide program activities. To improve implementation of essential emergency management functions, we provide additional recommendations related to planning, training and exercise, and public outreach in Chapter 4 of this report.

Chapter 1 **Introduction**

In 2003, the Portland City Council created the Portland Office of Emergency Management (POEM) in the adopted budget. The Bureau of Fire and Rescue had been responsible for emergency management before 2003, and the creation of an emergency management office was intended to centralize leadership and coordination of emergency management under the direction of the Mayor. In 2004, Portland City Code was modified to include POEM's responsibilities -- overseeing and coordinating the development of a comprehensive emergency management plan, providing training and exercises for City emergency responders, and overseeing the development of an Emergency Coordination Center.

POEM is funded through the City general fund and federal grant funds, including the federal Urban Area Security Initiative (UASI). The UASI program supports the emergency planning, equipment, training and exercise needs of high-threat, high-density urban areas around the country. UASI grant funds are passed through POEM to build emergency response capacity in the Oregon counties of Clackamas, Multnomah, Washington, and Columbia, and Washington's Clark County. In fiscal year 2009-10 POEM has a staff of 15.5 full-time positions, almost four of which are funded entirely through UASI funds. Many POEM staff work on both City emergency management and UASI grant work.

POEM is organized into four divisions: Planning; Training and Exercises; Community Emergency Services; and Operations and Administration. According to POEM's website, they provide planning, training, exercises and educational outreach programs related to natural and man-made disaster. The office also manages the City's Emergency Coordination Center during a major emergency, and activates emergency warning systems.

City's emergency management program includes advisory roles for all response bureaus

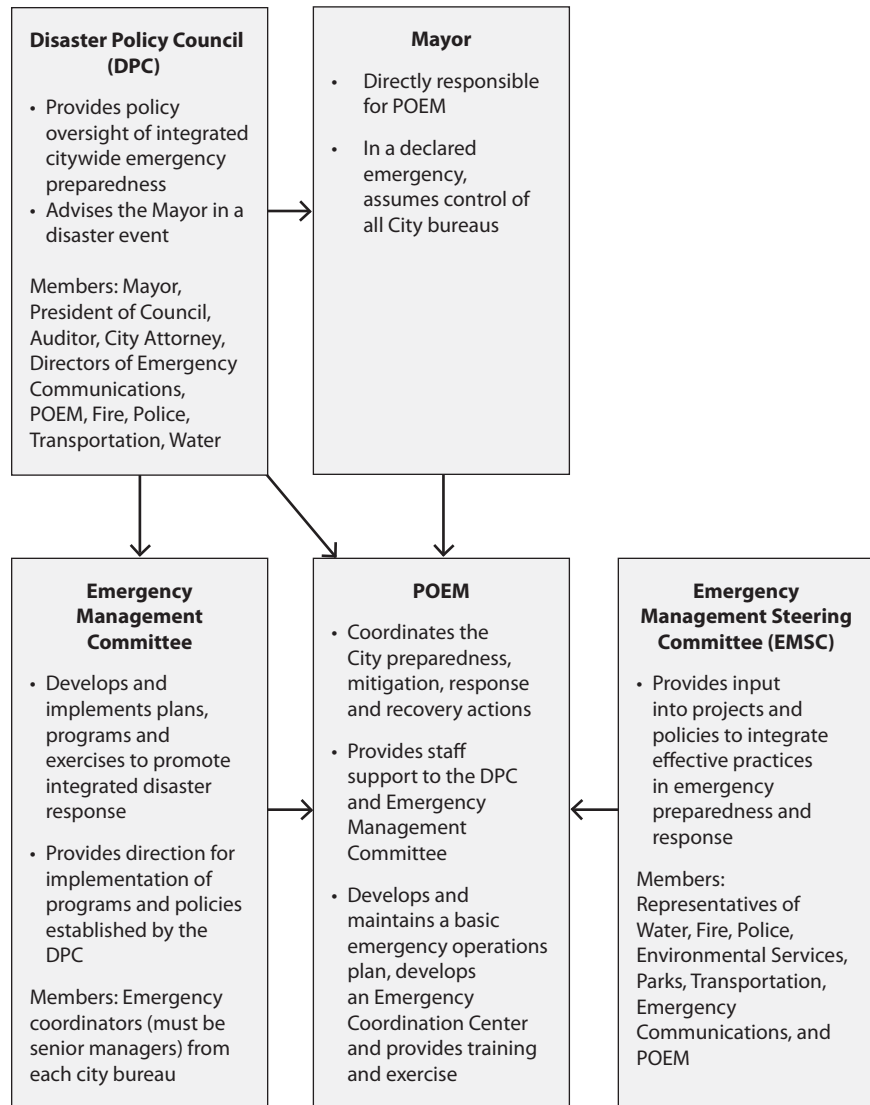
The City's response to emergencies relies on the work of traditional emergency response bureaus, like Fire and Police, and the emergency responders at bureaus such as Water, Transportation, and Environmental Services, who may assess damage, clear debris, and repair water and sewer lines. Because emergency management involves many City leaders and bureaus, City Council initially created two advisory committees – the Disaster Policy Council and the Emergency Management Committee. The Disaster Policy Council (DPC) consists of the Mayor, President of City Council, City Auditor, and directors of key response bureaus. The Emergency Management Committee is made up of senior managers from each City bureau. In an amendment to City Code in 2007, Council added a third group called the Emergency Management Steering Committee (EMSC), made up of representatives of most bureaus with emergency responsibilities, to advise POEM on emergency preparedness and response. The advisory committees and program structure are shown in Figure 1.

POEM has resolved some early program challenges

The initial years of POEM's existence were marked by frequent turnover in the director position, and questions about POEM's effectiveness. In 2005, the former Mayor commissioned an external review of the bureau to assess whether POEM was staffed and structured appropriately to accomplish its mission. The review concluded that POEM had serious management deficiencies that rendered it incapable of providing effective emergency management for the City, and noted POEM's failure to establish effective working relationships with other City bureaus and regional partners. The report recommended that POEM remain as a separate office, but that leadership be strengthened, and that long and short-term strategic plans and work plans be developed to define staff roles and duties. The current POEM director was hired in 2007.

City and regional emergency responders told us that in their view, POEM has resolved some of the criticisms from the 2005 report. Both internal and external emergency managers told us that the current POEM director has worked to improve relationships with City bureaus and external partners. We also noted that POEM has made progress

Figure 1 Emergency management program structure



Source: Audit Services Division, based on City Code

towards implementing specific emergency management projects. POEM is implementing an online crisis information system, called WebEOC, which will allow regional governments to quickly share information an emergency. In addition, POEM develops and main-

tains the City's Public Alerts website that aims to provide a one-stop site for information on closures and service disruptions. POEM has also made significant progress towards defining operations at the City's Emergency Coordination Center. However, through our audit work we found that the governance structure for POEM lacks the elements needed to effectively oversee and coordinate emergency management, and many emergency management functions remain incomplete.

Chapter 2 **Coordination and oversight limited**

An effective emergency management program should have clearly documented roles and responsibilities for managers and stakeholders and a multi-year strategic plan to guide emergency management efforts. The program should also have a work plan and method of evaluation to ensure accountability. In Portland, clear roles and responsibilities are particularly important, as each public safety bureau may at times be managed by a different City Commissioner.

We found that the City's emergency management program lacks clarity of roles, a long-term strategy, and accountability for implementation. This is a significant contributor to many of the implementation challenges identified in the next chapter.

Roles of POEM and advisory boards are unclear and undocumented

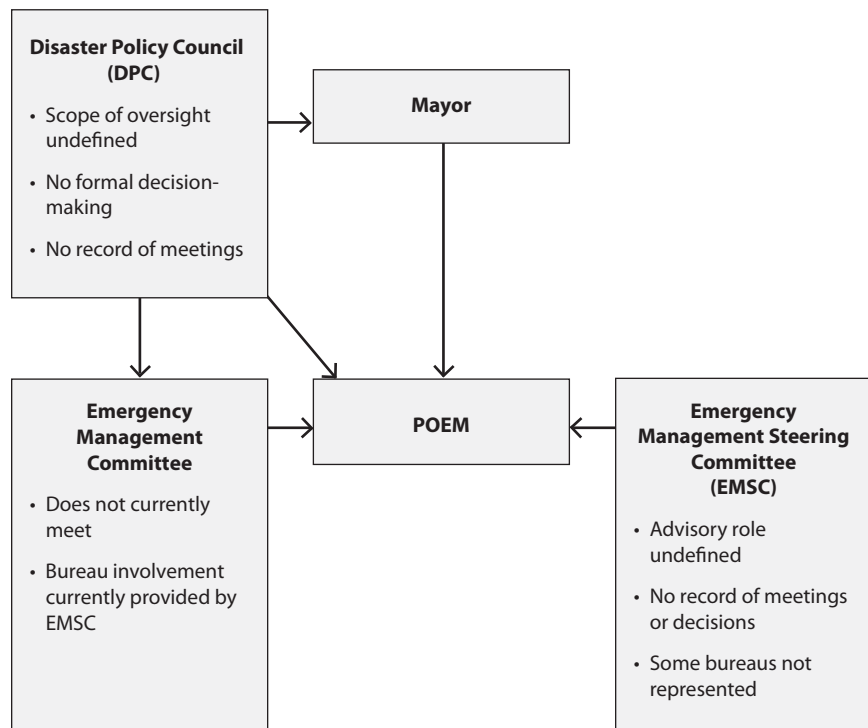
The City's emergency management structure appears to be consistent with best practices because POEM has specific duties defined in City Code, reports directly to the Mayor, and has advisory groups made up of stakeholders. Yet bureau and POEM emergency managers told us repeatedly that POEM and advisory committee roles and authority are unclear. When we discussed a draft of this report with POEM's management, they stressed that some of the audit's concerns are specific to duties they believe are not POEM's responsibility alone. They stated that they have no authority to compel bureaus to complete emergency management tasks, such as preparing plans or conducting training.

We recognize that POEM does not have the authority to direct the emergency preparedness activities of managers in other bureaus. POEM does, however, have the authority and duty to coordinate

emergency preparedness activities of City bureaus, and to provide comprehensive emergency planning in preparing for, mitigating against, responding to, and recovering from emergencies and disasters.

City Code provides tools to coordinate emergency management in the form of advisory groups of bureau emergency managers and a policy group of bureau directors. Through interviews with bureau emergency managers and directors, observation of advisory group meetings, and review of meeting records, we found that the existing advisory groups were not used effectively to coordinate City emergency management preparations. Bureau managers told us that POEM appears unclear on its role, and has not taken a leadership role in coordinating bureau emergency management activities. Figure 2 illustrates the problems with the existing governance structure.

Figure 2 Unclear oversight and advisory roles



Source: Audit Services Division analysis

The Disaster Policy Council (DPC) includes the Mayor, President of the Council, City Auditor and the directors of all of the main emergency response bureaus. The DPC is charged with providing policy oversight of integrated citywide emergency preparedness activities and initiatives, and advising the Mayor in a disaster. In practice, POEM uses the DPC to update bureau directors on emergency management issues such as pandemic flu or earthquake hazards. At DPC meetings we observed, there were no decisions made and no meeting summaries were prepared to document discussions. Bureau directors we spoke with suggested that the DPC is still defining its purpose, and could take a stronger role in advising POEM and setting City emergency planning priorities.

The Emergency Management Committee includes representatives of all bureaus, and is charged with implementing plans and exercises to promote integrated disaster response efforts. The Emergency Management Committee was designed to provide operational direction for the programs and policies established by the Disaster Policy Council. We found no record of the Emergency Management Committee ever meeting.

In 2007, Council created a third advisory body called the Emergency Management Steering Committee (EMSC). This committee of key response bureau emergency managers is charged with providing input on POEM projects and policies. The EMSC meets monthly to discuss current issues such as pandemic flu or winter weather. Meetings do not usually have agendas, and POEM was not able to provide meeting summaries or records of decisions.

According to City Code, some bureaus involved in emergency response, such as the Bureau of Technology Services, Risk Management, and Housing, are not represented on the EMSC. POEM invites emergency managers from those bureaus to attend meetings.

Despite a defined structure that involves multiple stakeholders, bureau and POEM representatives told us that responsibilities are unclear. Documenting the roles and responsibilities of POEM and advisory bodies may improve oversight and coordination of the City's emergency management program.

Emergency management program lacks an overall strategy to reduce risks and guide activities

An emergency management program must plan and coordinate activities needed to cope with disasters in a way that balances risks with resources. To do this effectively, POEM should have a multi-year strategic plan that defines the mission, goals, objectives and milestones of the emergency management program. The strategic planning process should begin with a realistic assessment of risks and vulnerabilities specific to Portland so that POEM can focus on likely and important hazards.

No comprehensive risk assessment

A comprehensive risk assessment identifies the range of possible hazard events that may impact Portland, and the vulnerability of people, property, and government services to that event. A risk assessment can help the City determine where to place emphasis in emergency planning and preparation efforts.

City bureaus completed some aspects of a risk assessment both formally and informally. For example, both the Federal Emergency Management Agency (FEMA) and the Fire Bureau completed reports assessing the City's vulnerability to natural hazards including earthquake, flood, landslide, and wildfire. POEM is currently updating a natural hazards mitigation plan, which also addresses risks from natural disasters. In addition, the Bureau of Technology Services (BTS) completed an analysis that ranked both threats and vulnerabilities to the City's technology systems. And many bureau emergency managers we spoke with identified other risks and vulnerabilities based on their emergency planning experience.

However, POEM has not assembled the completed studies or expertise of bureau emergency managers into a comprehensive risk assessment, an effort that could help prioritize emergency management activities across the City. This may lead to budget decisions, planning, training, and community outreach that do not align with the City's highest priority risks and vulnerabilities.

No strategic plan

A strategic plan would establish the long-term goals for the City's emergency management program and the method by which those goals would be accomplished. The City does not have a strategic plan for emergency management. Rather, the emergency management program appears to be driven by external factors, including state or federal program activities. This reactive approach to emergency management contributes to the problems with emergency planning, exercises, and public education described in the next chapter.

We recognize that POEM can not develop a strategic plan for a city-wide emergency management program without the involvement of all bureau stakeholders. POEM has limited ability to direct other bureau activities, and the risks and priorities described by POEM may not be consistent with risks and priorities defined by other response bureaus. Development of a strategic plan with the emergency managers on the Emergency Management Steering Committee, and approval by bureau directors on the Disaster Policy Council, could help City bureaus coordinate emergency planning work and ensure all City bureaus are working towards the same emergency management goals.

POEM has made progress towards developing a work plan

In interviews, many bureau emergency managers raised concerns about the performance and accountability of POEM staff in implementing emergency management activities. We found that POEM management has made recent progress in directing POEM's internal work. The current work plan for POEM includes defined objectives and project deliverables for each POEM section, and the POEM director told us that staff will be held accountable for achieving project deliverables. During audit fieldwork, staff accountability measures had not been implemented at POEM, but the development of a work plan is a step towards improving program implementation and staff accountability.

Chapter 3 **Essential emergency management functions incomplete**

National standards say an effective emergency management program must contain and complete certain essential emergency management functions, including emergency planning, exercises and training, public education and emergency public information, and an emergency response coordination system and facility.

These four essential emergency management functions are consistent with POEM's organizational structure, as POEM has divisions dedicated to planning, exercise and training, public education, and operations (which develops plans related to the Emergency Coordination Center). The responsibility for planning, training and exercises, and development of an Emergency Coordination Center are also duties defined in City Code.

Our audit found that POEM made progress in improving emergency response coordination by defining operations of the City's Emergency Coordination Center. However, we also found that many emergency plans are missing or incomplete. Emergency responder training and disaster drills are infrequent, with little or no follow-up to correct identified shortcomings in the City's ability to respond to a disaster. Public education efforts are disjointed and lack a consistent message, and there are no written plans to ensure that timely and accurate emergency public information reaches all segments of Portland's population.

National standards define essential emergency management functions

Emergency management best practices describe essential functions that enable jurisdictions to carry out emergency response, provide vital services, prepare citizens, and protect the safety and well-being of the community. These essential emergency management functions include:

- *Emergency Planning* – Planning provides a methodical way to identify actions to mitigate hazards, think through a potential crisis, determine capabilities, and set priorities for recovery. According to the Federal Emergency Management Agency (FEMA), planning has a proven ability to influence events before they occur, and contributes to coordination of effort in a disaster.
- *Training and Exercises* – Well-designed and well-executed training and exercises are the most effective means of assessing and validating plans, equipment, and assumptions; clarifying roles and responsibilities; improving interagency coordination and communications; and identifying gaps in resources. Exercise evaluation improves preparedness by highlighting potential shortfalls.
- *Public Education and Emergency Public Information* – Public education provides residents with information on the nature of hazards and the proactive measures they can take to prepare and respond. Emergency management best practices highlight the positive correlation between the level of public awareness and disaster outcomes. Emergency public information focuses on providing timely and accurate information during an emergency.
- *An Emergency Coordination Center (ECC)* – Emergency management best practices recommend establishing an incident command structure and facility because it helps provide a clear system for coordinating and supporting field emergency responders during an emergency.

Emergency management is an ongoing activity – federal standards recommend that these essential emergency management functions be continually evaluated and updated in order to maintain coordinated emergency response capabilities.

Emergency planning is incomplete

In Portland, bureaus such as the Fire Bureau or Water Bureau develop plans for events that specifically affect their own bureaus. POEM is charged with overseeing and coordinating the development of a comprehensive emergency operations plan for emergencies or

disasters that will require coordination of multiple bureaus. POEM prepares the overall emergency plan and relies on bureaus to prepare sub-plans related to specific hazards or emergency activities.

Factors contributing to successful planning efforts include the following:

- Planning should follow a defined process for plan development, approval, and dissemination to response bureaus, and plans should be routinely reviewed and updated.
- The scope of plans should be informed by a hazard analysis.
- Plans should have clear lead author responsibility and a collaborative planning team.

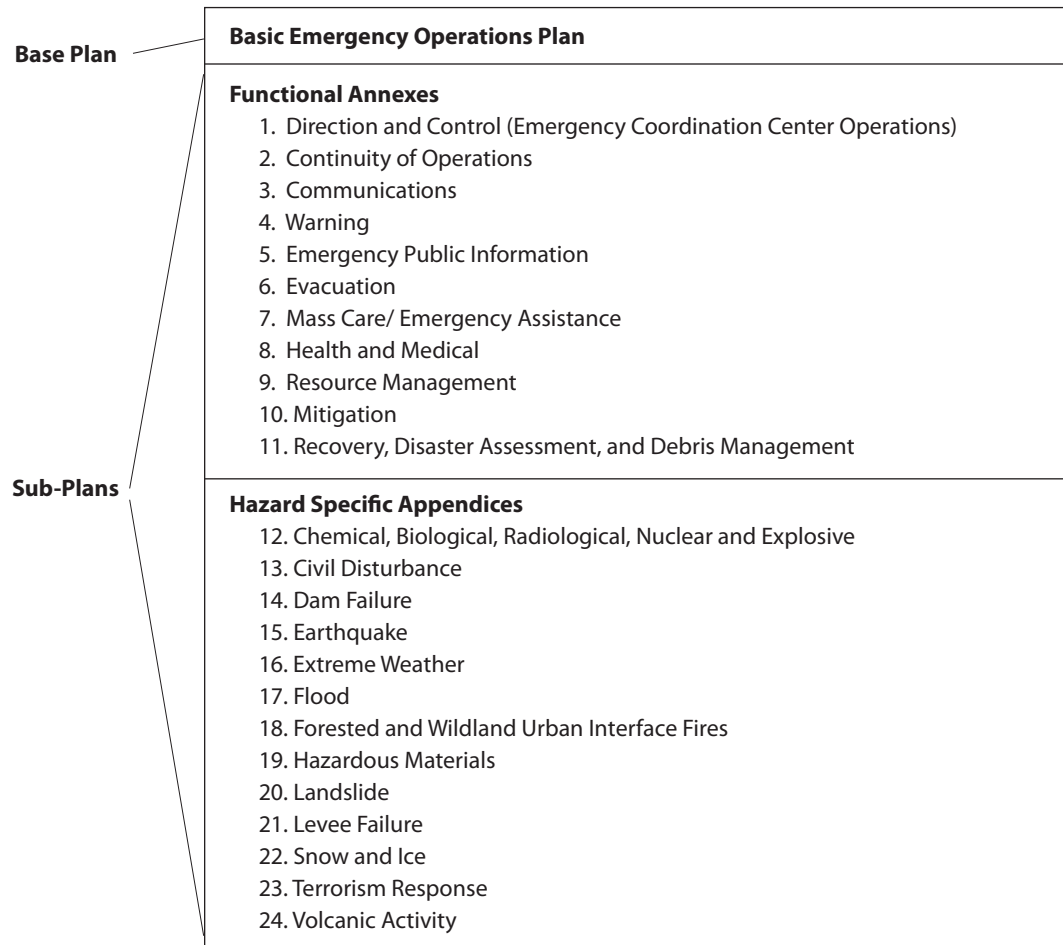
In our review of emergency plans, we found that many are incomplete, and there is no defined process for plan development or approval. There is also disagreement between bureaus and POEM both about what plans were needed, and who should prepare them. Not having updated and approved emergency plans that have been disseminated and exercised with all response bureaus could limit the City's ability to respond to a disaster. POEM management stressed that a lack of completed plans does not mean the City is unprepared. They noted that the planning process is more important than having a completed plan.

Planning process not defined

POEM is required by City Code to review the City's basic emergency operations plan in January of each year, and submit the results of the review and any recommendations for revision to Council for approval. The basic emergency operations plan was last approved by Council in 2006, with no reviews submitted to Council in any subsequent year. POEM management told us that one reason the basic emergency operations plan was not completed is that POEM worked with a consultant hired by the State Office of Emergency Management to help standardize all county and large city plans into a uniform template. This caused a delay of at least a year as the consultant completed the work.

As shown in Figure 3, the 2009 draft basic emergency operations plan includes 24 sub-plans to address emergency activities such as communications and evacuation (Functional Annexes), and specific hazards such as earthquakes or landslides (Hazard Specific Appendices). Responsibility for preparing a separate plan for each annex or appendix is assigned to POEM or a lead emergency response bureau, but there is no defined approval process for those sub-plans.

Figure 3 Comprehensive Emergency Management Plan Components



Source: June 2009 Draft City of Portland Basic Emergency Operations Plan

We found that less than a quarter of the required plans are complete. An additional third are in process to varying degrees – some, such as the plan for Emergency Coordination Center Operations, are actively under development; others were drafted in prior years but were never finalized. POEM was unable to locate the remaining plans, or provided ones drafted by other jurisdictions. In many cases, the plan status is unclear. POEM staff told us that the lack of an approval process makes it difficult for them to determine whether a bureau-led plan has been completed.

With no defined process for development or approval of plans, POEM and bureau employees spent time and funds on planning efforts that did not result in usable documents. Planning efforts we reviewed that were not completed include the following:

- Continuity of operations plan: In 2005, POEM began planning for City continuity of operations in the event of a disaster. POEM then hired consultants, with \$180,000 in federal money, to assist with continuity planning. Yet the City still has no citywide continuity of operations plan that identifies dependencies between bureaus, nor the systems and priorities for restoring services after a disaster.
- Evacuation plan: The Police Bureau developed a plan for evacuation, which was adopted by the City Council as City policy in September 2007. In March 2008, POEM hired a consultant to produce a new evacuation plan, with \$200,000 in federal money. No new evacuation plan has been approved or disseminated.
- Natural hazards mitigation plan: Although POEM formed a planning team of City bureaus and hired a contractor to facilitate update of the 2005 plan, the federally-required plan was not finished by the December 2009 deadline. Additionally, POEM posted information on their website about a public comment period and a past public meeting, but this opportunity for public involvement never occurred. This misstatement, and not providing the opportunities for public involvement required by federal guidelines, could potentially jeopardize the City's receipt of federal mitigation dollars,

such as \$2.7 million for the East Lents Floodplain Restoration Project. Even if federal funding is not jeopardized, we remain concerned that residents were not provided an opportunity to comment on the mitigation plan, and may have been misled about comment opportunities.

- **Terrorism plan:** The Police Bureau submitted a draft terrorism plan to POEM in November 2007. The plan has not been approved or circulated to other involved bureaus, and neither Police Bureau nor POEM staff knew its current status.

These examples illustrate the risks resulting from not having a defined process for plan development and approval – without a process, planning is often poorly organized, work is repeated, consultant contracts do not result in usable products, and the City is left without emergency plans.

Disagreement about scope of planning and lead author responsibility limits plan development

One reason plans have not been completed is disagreement among the response bureaus and POEM about which plans are needed and which bureau should complete them. A draft hazard analysis POEM completed in 2006 recommended that only the most frequent or devastating hazards, such as landslides or earthquakes, should have separate plans. For example, rather than completing three separate plans for terrorism, chemical warfare, and civil disturbance, the hazard analysis proposed combining these three hazards into one plan. Because many events require similar response activities, combined plans would decrease the number of separate planning efforts required of bureaus.

Yet the most recent draft of the basic emergency operations plan assigns responsibility for thirteen separate hazard plans, creating added planning requirements without a clear benefit to preparedness. For example, the Portland Bureau of Transportation (PBOT) has the responsibility for completing a hazard plan for levee failure. PBOT staff told us the response to a levee failure should be addressed in the flood plan, also drafted by PBOT, or the evacuation plan. PBOT

management stressed that their role is similar in many types of emergencies, and having numerous separate plans for each emergency type does not enhance their preparedness. PBOT is assigned responsibility for drafting five separate hazard plans in the most recent draft basic emergency operations plan.

According to POEM staff, very few of the plans have been completed by a collaborative planning team. Involving a team of bureau representatives in planning can help identify cross-bureau resources, and ensure that all bureau emergency responders understand and accept their roles in an emergency. For example, collaborative planning could improve the City's communications with external partners – conflicting requests from different bureaus during an emergency are less likely when roles are clearly understood.

To complete the emergency plans, the City will need clarification of planning responsibilities, agreement on the scope of emergency plans that are needed, and a clear process for plan development and approval. POEM staff noted that planning focus has frequently shifted with the turnover in POEM directors, and that bureaus do not always have the resources they need to complete the required planning work. POEM staff told us that under the current director, they believe they now have the foundation to move forward and complete basic plans.

Training and exercises are infrequent, not risk-based, and have little follow-through

After emergency planning, the next step in an effective emergency management program is to train emergency responders in their responsibilities, and develop a program of regularly scheduled exercises and drills to assess emergency plans and capabilities. City Code requires POEM to provide training and exercises to keep emergency responders proficient in their response and recovery skills.

In interviews, bureau emergency managers consistently cited the lack of training and exercises as a top concern. In a survey we conducted of City staff assigned as Emergency Coordination Center responders, we asked an open-ended survey question about what POEM could do to improve preparedness of Emergency Coordination Center

responders. Over 60% of Emergency Coordination Center responders said that better and more frequent training and exercises would best improve preparedness.

According to national guidelines, an effective training and exercise program should include:

- A training needs assessment, a schedule of training, and maintenance of training records; and
- A risk-based schedule of exercises, including exercise evaluation to identify improvements and tracking of corrective actions.

We found that POEM made some progress in evaluating training needs and scheduling required training. But the lack of scheduled exercises to inform response preparation, and a lack of follow-up to completed exercises, means the City may not be identifying limitations to response capabilities, nor making needed improvements.

POEM making efforts to address infrequent training with a needs assessment and schedule

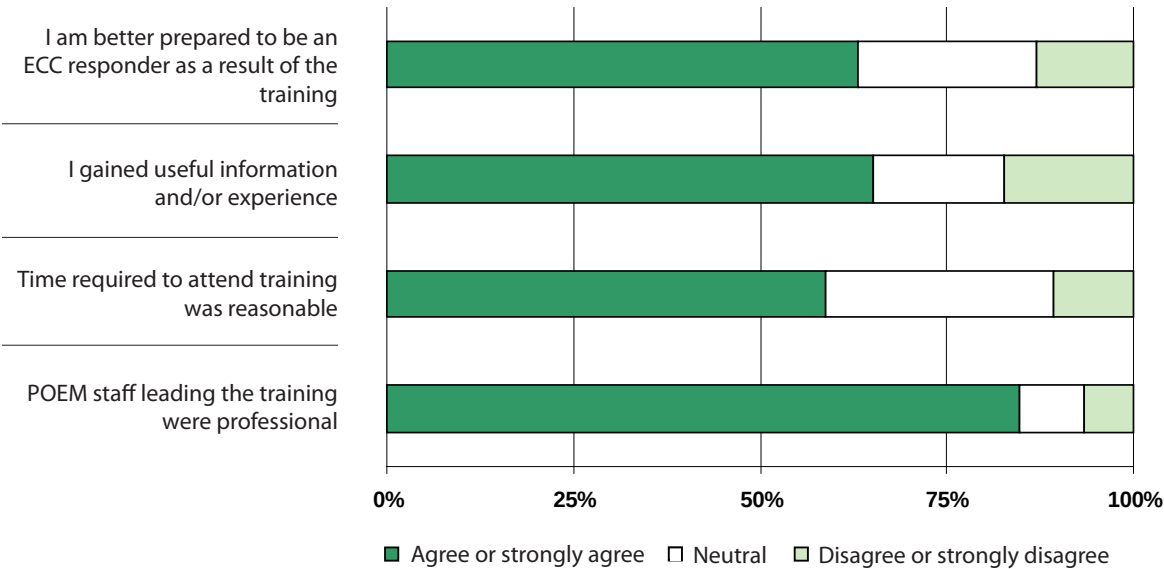
POEM focuses on training bureau staff in emergency plan contents and Emergency Coordination Center response. POEM staff told us that past training was largely driven by grants and not by any assessment of City vulnerabilities. For example, for almost a year all training was focused on preparing for the City's involvement in a federal homeland security exercise ("Top Officials" or TOPOFF). Staff noted that training was effectively put on hold after the October 2007 TOPOFF event as POEM focused on updating hazard and Emergency Coordination Center plans.

POEM also must ensure City staff meet federal requirements for training in the national Incident Command System (ICS). Bureau emergency managers told us information from POEM on available training was inconsistent, making bureau efforts to meet ICS training requirements difficult.

Tracking of ICS training is also inconsistent. POEM records showed that less than a quarter of Emergency Coordination Center responders completed basic ICS training. Yet in our survey of responders, almost 90% reported completing the training.

We identified some successes in POEM’s work to define needs and conduct training. During the course of our audit, POEM staff provided us with a draft report defining the training needs for Emergency Coordination Center responders and a draft training schedule. In a survey of Emergency Coordination Center responders, most responders rated POEM training positively, as shown in Figure 4.

Figure 4 Emergency Coordination Center (ECC) training feedback



Source: Audit Services Division survey of ECC Responders

Exercises and drills are infrequent, with little evaluation or follow-up

In interviews, bureau emergency managers identified the need for an effective exercise program to clarify roles and responsibilities in an emergency and to refine emergency plans. For example, a discussion-based exercise could clarify responsibilities for bridges after an earthquake – identifying which bureaus would block access to bridges after the event, conduct structural inspections, communicate results of inspections, and clear bridges for safe transport of emergency vehicles. This type of exercise is infrequent.

POEM staff provided a list of exercises they were involved in over the last two years, ranging from the full-scale TOPOFF exercise to a drill on using amateur radios at fire stations. The winter snowstorm of 2008 was also included on the exercise list because POEM management determined that it provided a real-world opportunity to exercise response capabilities. Most of the drills initiated by POEM were limited to the use of WebEOC or neighborhood volunteers. POEM did not initiate any exercises linked to identified hazards or risks facing the City. In most cases, POEM was participating in or providing support for exercises initiated by other entities rather than developing a risk-based exercise program to meet City-specific preparedness goals.

Once an exercise is completed, an effective program should include evaluation and follow-up for lessons learned. POEM staff completed an after-exercise evaluation and improvement plan for only two of the 14 exercises they listed for the last two years: the federal TOPOFF drill and the winter snowstorm of 2008. For the other exercises, there was no documentation of exercise results, lessons learned, or corrective actions needed. For the two after-action reports that were completed, POEM did not track implementation of corrective actions. With no method to ensure corrective actions are implemented, the City may not be making the changes necessary to improve preparedness and response.

POEM lacks a strategic approach to public education

National standards for emergency management include public education, defined as the process of informing the public of hazard risks, and preparing the public to face and respond to those hazards. Because public services and emergency responders may be unavailable or overwhelmed during a major emergency, having a community prepared to respond to and recover quickly from a disaster is essential. Experts agree that there is a positive correlation between the level of public awareness and success of disaster recovery.

To educate the public so they are prepared for disaster, emergency management best practices expect an emergency management program to have a public education plan with long and short-term goals, based on a hazard identification and risk assessment. The plan should identify the jurisdiction's various audiences and the best methods to reach them, and develop clear and concise messages based on the jurisdiction's risks and hazards. In order to impact public behavior, education efforts should strive to maximize the reach and frequency of message delivery. An effective emergency management program should also identify and engage community stakeholders such as businesses, community organizations, and schools in public education efforts.

We found that POEM lacks a public education plan. In the absence of a plan, we evaluated POEM's public education efforts and found that they lack defined audiences and are disjointed. In addition, with the exception of the Neighborhood Emergency Team (NET) program, POEM has limited direct engagement with public education stakeholders. POEM management told us that in order to leverage resources, they rely on Multnomah County to engage stakeholders in public education efforts since they have more relationships with community organizations on which to draw.

Public outreach efforts are disjointed

POEM's Community Emergency Services staff make presentations, attend community events and send press releases and emails in order to educate residents about the need to prepare for emergencies. We reviewed public education outreach documents and events conducted in 2009. Though the majority of outreach was about the importance of being prepared, the outreach activities and documents

lacked consistent and repeated instructions about how to prepare for an emergency or what to do immediately after. In addition, POEM has not identified target populations. As such, the majority of outreach activities were not tailored to reach specific high-risk populations.

POEM has not articulated a clear and concise message or identified key audiences based on Portland's risks and hazards, meaning that outreach is unlikely to result in an informed public prepared to respond to disaster. POEM management told us that they are working to develop a communication plan with a clear message to address general preparedness guidelines and local hazards.

Neighborhood Emergency Team (NET) program effectively engages community members but lacks controls to avoid risk

POEM engages community stakeholders through the Neighborhood Emergency Team (NET) program. Many residents have been trained in disaster response; however, we found that the NET program lacks the controls needed to help the City and volunteers avoid risks like lawsuits or injury.

The NET program offers free rescue and disaster response training to anyone older than 14 who lives or works in Portland. Training participants learn to work in teams and assist their neighbors in responding to and recovering from an emergency; they also speak to groups about emergency preparedness. After completing the training, participants can become certified NET volunteers and receive a vest, helmet, and photo identification badge. POEM estimates that 1,066 people have been certified as Portland NET volunteers between 1994 and 2009. However, these figures may not be current because POEM lacks a robust tool to track and contact volunteers and relies on volunteers to inform POEM if they have moved or no longer want to serve.

Though POEM engages community members to prepare for emergencies and to help educate others through the NET program, the program lacks controls to protect the volunteers and the City from risks like injury or lawsuit. For example, there are no written expectations for how certified NET volunteers will perform their duties and

what activities are outside their roles. In addition, POEM does not screen volunteers who receive the NET identification badge. POEM management told us they do not want to discourage anyone from participating in the NET training, but are considering instituting changes for people who become certified volunteers. POEM is working with the City Attorney's Office to create position descriptions for certified NET volunteers, and are considering conducting background and driving record checks for those volunteers assigned to be team leaders.

**Emergency public
information policies
and tools needed**

Emergency public information is the process of delivering messages to the public during an emergency. An effective emergency management program should have a plan and tools to inform segments of the public impacted by an emergency of changing conditions and impacts on services. We found that the emergency public information tools frequently used by POEM lack policies to guide use and may not reach parts of the population without internet or other such communications tools.

POEM's emergency public information plan not comprehensive

POEM has an emergency public information plan; however, the plan does not identify Portland's varied audiences and the appropriate communication tools to reach them. It does not contain information on when to request activation of the Emergency Alert System, or for how to use internet-based communication methods frequently used during small-scale incidents. In addition, the plan is outdated as it assigns the lead public information responsibility to a staff position that no longer exists.

Regularly used emergency public information tools limited in reach

The City has relied heavily on internet-based means to communicate with the public during small-scale events. For example, during a snowstorm in 2009, POEM and the Mayor sent information about the impacts of the storm through the internet-based social media tool Twitter. Additionally, POEM runs the City's Public Alerts website, a site for information on weather, closures and delays. Internet-based

tools certainly can communicate real-time information to large audiences, but this method may not reach members of the public without internet access or who are not engaged in social media. After we wrote a draft of this report the Public Alerts website's capabilities were expanded so text messages could be sent to subscribers' cell phones.

One example of a non-internet based tool is a telephone emergency notification system. The City had a system to send emergency communication to the public via telephone; however, the contract with the system vendor lapsed in 2009 and the tool is no longer available. In anticipation of the end of the contract, POEM, the Water Bureau, and the Bureau of Technology Services began the contracting process to obtain a replacement telephone notification system. The proposal process was still open at the time we finished our audit fieldwork. By summer 2010, the City will be able to send voice alerts to subscribers' telephones.

In addition to keeping the public informed, widespread emergency public information is important to ensure the 9-1-1 system operates successfully during an emergency. Management from the Bureau of Emergency Communications (BOEC) said that during a disaster, non-emergency calls from citizens seeking information could overwhelm the 9-1-1 system and that BOEC staff may be unable to answer emergency calls. BOEC told us that there should be a plan to establish and staff a separate call center to answer non-emergency calls during a disaster, but that a plan had not been developed. POEM management indicated that it is BOEC's responsibility to develop a plan to set up and staff a non-emergency call center as part of their continuity of operations plan. POEM management added that during a disaster, the 2-1-1 information and referral service will be used as an information source, just as it was during the swine flu outbreak. However, this arrangement is not formalized.

**Plans needed to ensure
successful responder
communications**

Communications interoperability helps ensure that emergency responders across organizations and jurisdictions can talk with each other during an emergency. Emergency management standards

expect that there is a plan to ensure internal and external interoperable communications with all stakeholder entities and emergency personnel. We found that the City has tools which allow for interoperable communications, but lacks a City-wide interoperability plan, resulting in misunderstanding between bureaus and little practice of the system.

The City of Portland has an 800-megahertz radio system allowing for communications across the City and the region. POEM is not responsible for operating or maintaining the radio system. The bureaus that are responsible for radio system operations told us conflicting information about how the system would be used during an emergency. In addition, there are few drills in which responders across multiple City bureaus practice communicating over the radio. Although operating and maintaining the 800-megahertz radio system is not POEM's specific responsibility, POEM's role as the City's central emergency coordinator should include facilitating a City-wide communications interoperability plan to help ensure that there is understanding about how the system will be used during an emergency.

Further, the City is working to replace the current radio system because it is old and support from the manufacturer will soon be unavailable. There is also a separate effort to replace the system in other regional jurisdictions. Regional communications interoperability will be maintained only if all jurisdictions adopt the same system at the same time. POEM should help ensure that future system planning maintains regional interoperability since major emergencies will require communication with other jurisdictions.

**Survey identified
concerns regarding
ECC responder
readiness and overall
communication**

City Code requires that POEM oversee the development of the City's Emergency Coordination Center (ECC) and ensure that the ECC is appropriately sited, staffed, equipped and maintained. POEM is also required to schedule regular training to ensure operation efficiency. The role of the ECC is to coordinate the activities of multiple City bureaus in an emergency. The ECC is only activated in significant emergencies, and it has not been fully activated since the 1996 flood.

POEM maintains a list of ECC responders from each bureau, and sends a test page to those responders once a week at a set time to ensure that responders can be reached in an emergency. According to POEM management, individual bureaus are responsible for selecting ECC responders and ensuring the list of responders is current. While bureaus can and do identify their employees who will serve as responders, City Code tasks POEM with ensuring that the ECC is appropriately staffed. Without an accurate, centrally-maintained list of ECC responders, coordination and communication are more difficult before and during a disaster.

We sent a survey to all of the ECC responders listed by POEM and to some additional responders identified by bureaus. Sixty percent of the ECC responders completed the survey. Of those who completed the survey, almost 25% said they either were no longer an ECC responder or did not know if they were an ECC responder. One responder noted:

"Approximately three months before the TOPOFF exercise I was recruited to be an ECC responder...Following TOPOFF, I have not once been contacted regarding my continuing role as an ECC responder. I have no idea if I am an ECC responder or not."

Many survey respondents noted a lack of routine communication, training, or exercises in ECC operations. More than a quarter of respondents said they had not received any information from POEM in the last two years, or had never received information from POEM.

"Communication is key in emergency situations, and from my perspective POEM needs to do a better job of communicating and outreach with ECC responders. Only then will my confidence improve."

Respondents also questioned the use of pagers as a means of notification. They suggested that POEM needs to update the ECC responder list, clarify ECC roles and responsibilities, and provide continual training in roles and expectations.

Survey respondents also identified challenges in communication within bureaus, or in maintaining focus on emergency preparedness in light of other bureau responsibilities. Respondents suggested clarifying how the City ECC would interact with bureau emergency operations centers, and noted the challenge of coordinating multiple bureaus:

"POEM ... can't do it alone. This is a citywide challenge."

POEM has made recent progress towards improving operations of the Emergency Coordination Center

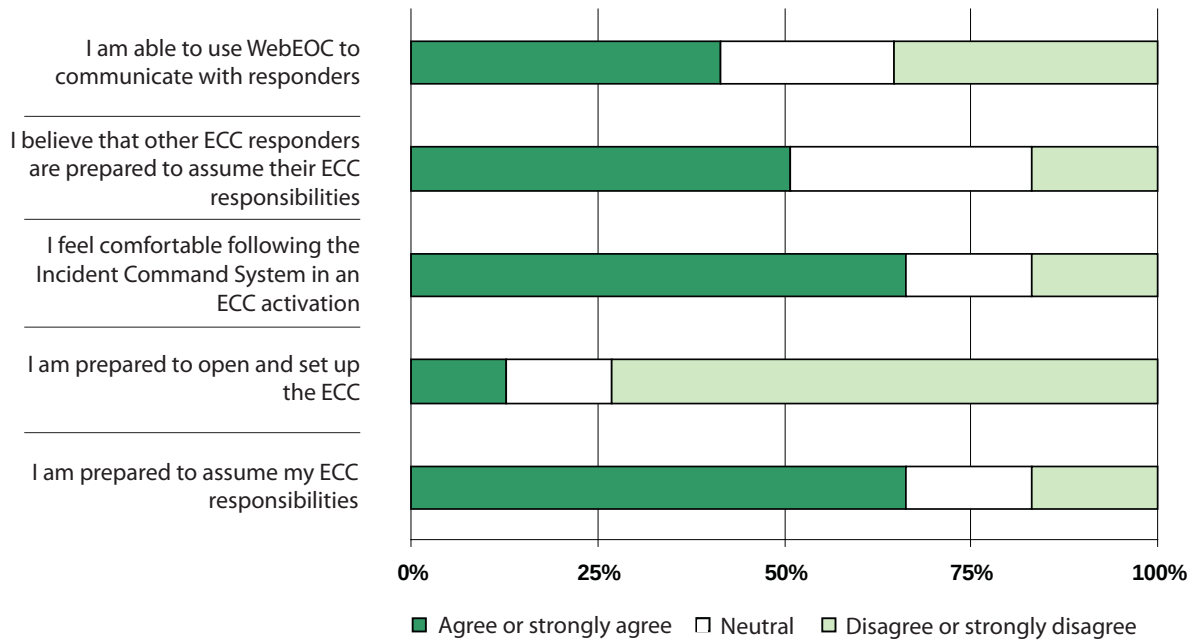
POEM management has been working to resolve many of the problems identified in our survey of ECC responders. In 2009, POEM staff drafted a plan to establish the overall structure, roles, responsibilities and direction for the operation of the ECC. In September 2009, POEM held a two-day training to familiarize bureau emergency managers with the draft plan, and to test plan operations. POEM management told us the feedback they received from bureau managers will be included in subsequent drafts of the ECC plan.

POEM is also drafting standard operating procedures for each ECC section. Once position descriptions are complete, they intend to refine the list of ECC responders, and begin training in section-specific duties. POEM is also working with the Water Bureau to develop a facility to house Water Bureau emergency staff, POEM staff, and ECC operations. A number of survey respondents commented on recent efforts:

"POEM is making great strides in the last few months, I hope they keep it up."

More than half of responders reported that they are prepared to assume and carry out their ECC responsibilities, as shown in Figure 5.

Figure 5 Readiness of ECC responders



Source: Audit Services Division survey of ECC Responders

Most people who completed the survey noted that they are happy to serve as ECC responders:

"I am honored to be a part of the ECC and would appreciate better communication and training opportunities."

While the ECC operating procedures are not complete, it appears that POEM is taking steps to ensure that the ECC is appropriately sited, staffed, equipped and maintained. Completing those guidelines, updating ECC responder lists, training responders in section-specific duties, and scheduling routine exercises at the ECC should improve the City's capacity to respond to a major disaster.

Chapter 4 **Audit Recommendations**

POEM has made progress in a number of areas over the last two years, including improved internal and external relationships, completion of some specific projects, and better definition of Emergency Coordination Center operations. POEM is also working to improve staff accountability through an annual work plan and to strengthen controls of the Neighborhood Emergency Team program.

However, program coordination is unclear and POEM still lags in implementing essential emergency management functions. To improve the ability of the City to prepare for, respond to and recover from an emergency, and to ensure that City resources are focused on addressing the highest priority risks, we recommend that the Mayor direct POEM, with the advice of the Emergency Management Steering Committee and approval of the Disaster Policy Council, to first complete the following two critical steps:

- 1. Review and document the governance structure, roles and responsibilities, and operating principles for the City's emergency management program, including POEM and bureau advisory committees.**

As part of this review, POEM should assess the composition of the advisory committees, and consider eliminating the Emergency Management Committee. The revised governance structure should clearly define the role and responsibility of POEM, the Disaster Policy Council, and the Emergency Management Steering Committee, and the methods for decision making and record keeping.

2. Complete a city-wide risk assessment that includes an evaluation of threats, vulnerabilities, and internal weaknesses. Based on the risk assessment, complete a strategic plan to define emergency management goals.

The risk assessment should be the basis for developing a multi-year strategic plan that defines the mission, goals, objectives and milestones for the emergency management program. A risk assessment can be as simple as convening knowledgeable individuals to analyze 'what-ifs.' Much of the necessary background hazard analysis and bureau expertise is available to POEM. Once a risk assessment and strategic plan are complete, POEM should provide annual updates to the Disaster Policy Council on progress towards meeting program goals.

Once the governance structure is clarified and a strategic plan is completed, we recommend that the Mayor direct POEM, again with the advice of the Emergency Management Steering Committee and the approval of the Disaster Policy Council, to complete the following:

3. Define the scope of the City's emergency planning, and document the process for plan development, approval, and review.

The emergency planning program should first define the scope of the City's needs for emergency plans. The lead responsibility for development of each plan, the method of stakeholder involvement, and the method for plan development and approval should also be defined. Finally, the program should include a schedule for plan completion, and a method for plan exercise, review and revision. Requiring Disaster Policy Council approval of the emergency plan development helps ensure that there is agreement among bureaus about plan needs, responsibilities, and the schedule of plan completion.

4. Document and implement a needs-based training and exercise program.

POEM made recent progress in defining City training needs. POEM should build on this progress by completing a needs-based multi-year training and exercise schedule; and documenting the method for evaluating exercises and for tracking implementation of corrective actions. POEM should also develop a system for tracking compliance with federal Incident Command System training requirements for Emergency Coordination Center responders.

5. Define the strategy for public education.

The strategy should include long-term and short-term goals; a defined audience; and a message based on Portland's risks. The strategy should be used to guide POEM's public education work.

6. Develop policies for clear and consistent use of emergency public information tools.

POEM should ensure that all segments of Portland's population receive timely and accurate information during large and small emergencies.

7. Complete and implement the Emergency Coordination Center operating procedures.

POEM has made progress towards defining ECC operations. They should update the list of ECC responders as soon as possible, and begin training all responders in ECC operations.

Chapter 5 Objectives, Scope and Methodology

The two objectives of this audit were to:

- 1) Assess whether the current governance structure provides adequate oversight for emergency management coordination and implementation; and
- 2) Determine the degree to which POEM has implemented essential emergency management functions, including planning, exercise and training, public education and communication, and emergency response coordination.

To accomplish these objectives, we conducted research into best practices for an emergency management program, as defined by the Emergency Management Accreditation Program, the National Fire Protection Association, and others. We reviewed federal emergency preparedness guidance, including the *National Preparedness Guidelines* and *Comprehensive Preparedness Guide 101*. We reviewed our prior work on the City's involvement in federal pandemic flu planning, and reviewed audits conducted by other local and federal government audit offices.

We conducted interviews with POEM management and staff, and emergency management program managers for key response bureaus including Police Bureau, Fire Bureau, Bureau of Emergency Communication, Water Bureau, Portland Bureau of Transportation, Parks and Recreation Bureau, Bureau of Environmental Services, Risk Management, Bureau of Technology Services, and the Bureau of Housing. We also interviewed external stakeholders, including emergency managers in Multnomah County, Washington County, and the American Red Cross. We observed meetings of the City's Disaster Policy Council and Emergency Management Steering Committee.

To assess POEM's preparation and training of Emergency Coordination Center (ECC) responders to staff and operate the City's ECC, we conducted a survey of staff assigned as emergency coordination center responders. We also reviewed draft guidelines related to ECC activation, and observed training on the draft ECC guidelines.

To assess implementation of emergency planning, we requested copies of all current City emergency plans, and evaluated those plans for consistency with best practices. To assess training and exercise, we requested training records for City staff, and documentation of emergency exercises, including exercise evaluations and improvement plans. We compared exercise records against the recommendations of the Homeland Security Exercise and Evaluation Program.

To assess public education and information, we requested copies of public education plans, and evaluated documentation of public outreach efforts. We also reviewed plans for emergency communications between bureaus, and methods for communicating with the public during an emergency.

We focused the audit on POEM's role in coordinating and implementing the City's emergency management program. We did not review the emergency planning and preparation of individual bureau for bureau-specific response, except as that response related to the city-wide coordination. We reviewed the Federal Emergency Management Agency report of their on-site monitoring of POEM's management of the federal Urban Area Security Initiative grant program, and POEM's response to the report, but we did not conduct further tests of POEM's grant administration. This could be the subject of future audit work.

The Audit Services Division answers directly to the elected City Auditor, who is charged by City Charter with conducting performance audits in accordance with generally accepted government auditing standards. These standards require auditors to be independent of the audited organization to avoid an actual or perceived relationship that could impair the audit work. The City Auditor serves on the City's Disaster Policy Council. Because the City Auditor has not had

direct responsibility for emergency management program implementation in the course of her Disaster Policy Council involvement, we do not believe the City Auditor's membership on the Disaster Policy Council constitutes an organizational impairment.

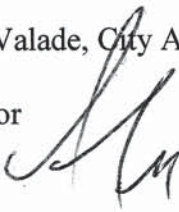
We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Responses to the Audit



OFFICE OF MAYOR SAM ADAMS
CITY OF PORTLAND

TO: LaVonne Griffin-Valade, City Auditor

FROM: Sam Adams, Mayor 

DATE: May 17, 2010

SUBJECT: Response to Auditor's Report #389: "Emergency Management: Coordination limited and essential functions incomplete"

Thank you for sharing your findings and recommendations concerning the City's emergency management program. As the Commissioner responsible for the Office of Emergency Management, I support the audit recommendations and can report that steps to address its findings are already well underway.

As you noted, Carmen Merlo, Director of POEM, has made significant efforts since she assumed her role to improve readiness by clarifying emergency coordination arrangements and leading efforts to acquire a west-side staging area and build a new Emergency Coordination Center. Despite fiscal constraints, I made funding of public safety programs, including the Emergency Coordination Center, a top priority in my FY 2011 budget.

Although I share your concerns that planning and coordination among bureaus still needs improvement, I am heartened by abundant evidence that bureaus can and do work effectively and in the best interests of Portlanders in a crisis.

As Mayor, I depend upon the Office of Emergency Management to support timely and effective decision-making on issues of critical importance to the life, health, and welfare of Portlanders. Indeed, their efforts are critical not just to the city, but to the region as a whole. For this reason, I am reviewing steps I can take to clarify and strengthen the role of the Disaster Policy Council (DPC) before, during and after a disaster. This review includes consideration of the relationship of the DPC to the bureaus, their emergency management programs, and the overall emergency planning and preparedness process of the city and the region.

I intend to work closely with my City Council colleagues to improve cooperation with the emergency planning and preparedness program in the months ahead. I look forward to achieving significant progress on these efforts by the end of the calendar year.



An Equal Opportunity Employer

May 17, 2010

TO: LaVonne Griffin-Valade, City Auditor

FROM: Carmen Merlo, Director

SUBJECT: Portland Office of Emergency Management Response to Auditor's Report #389: "Emergency Management: Coordination limited and essential functions incomplete"

Sam Adams, Mayor
Carmen Merlo, Director

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Thank you for the opportunity to respond to the findings and recommendations of your audit of the city's emergency management program. Although the audit identified several opportunities for improvement, I am pleased to acknowledge that the audit presents an honest and impartial review of the city's preparedness.

When I requested this audit shortly after taking up my role as director of the Office of Emergency Management, I considered it an important initial step in energizing our partners and staff with a common sense of clarity and urgency upon which we could build a shared sense of ownership. Although it took longer to initiate and complete this review than I had hoped, I remain optimistic that these goals will be met.

Since the Auditor's Office began its review, the Office of Emergency Management has taken several steps under my direction to address issues included in your findings that I am confident will satisfy your recommendations. These actions include developing and implementing:

- o A strategic plan that shapes and guides the bureau's programs, policies, and procedures
- o Guidance governing emergency communication and public warnings and notifications
- o A community outreach plan that will identify target populations and audiences, align key messages to audiences, and clarify the content/message management responsibilities of staff and partners
- o Training for key staff responsible for conducting public participation and community outreach activities

The City of Portland will make reasonable accommodation for people with disabilities. Please notify us no less than five (5) business days prior to the event by phone at 503-823-4375, by the City's TTY at 503-823-6868, or by the Oregon Relay Service at 1-800-735-2900.

- o Governance arrangements to ensure the sustainability and accountability of Neighborhood Emergency Teams while also clarifying issues surrounding liability and indemnification

Your report recognized the progress made by the Office of Emergency Management in a number of key program areas over the last two years. Our efforts to clarify emergency coordination center operating procedures, train responders, exercise roles, and initiate programs to acquire a west side emergency staging area and a new Emergency Coordination Center have strengthened our relationships with key bureaus and their staff. These investments have already demonstrated their value during recent events, such as the H1N1 pandemic and will undoubtedly pay dividends when a more significant disaster strikes.

Over the next several months the Office of Emergency Management will work with the mayor's office to review and clarify the governance structure of the City's emergency management program and better define and document the City's emergency planning and preparedness process.

I appreciate your recommendations and suggestions for improvements – they will strengthen the City's emergency management system and help us achieve further progress. As the Office of Emergency Management and its partners build on our recent efforts, I look forward to sharing additional successes with you.

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*Emergency Management: Coordination limited and
essential functions incomplete*

Report #389, May 2010

Audit Team Members: Kari Guy
Jennifer Scott

This report is intended to promote the best possible management of public resources.
This and other audit reports produced by the Audit Services Division are available for viewing on the web at: www.portlandoregon.gov/auditor/auditservices. Printed copies can be obtained by contacting the Audit Services Division.

LaVonne Griffin-Valade, City Auditor
Drummond Kahn, Director of Audit Services

Other recent audit reports:

Portland Police Bureau: Drug training aid procedures strengthened, recently improved practices should continue (#391, May 2010)

City Sheltered Market Program: Need for clearer focus and stronger management (#379, January 2010)

City of Portland 2009 Resident Survey Results (#380A, November 2009)

