



Emergency Management Audit of Emergency Preparedness Maricopa County Internal Audit June 2019

Why This Audit Is Important

The Maricopa County Department of Emergency Management (MCDEM) has established an Emergency Preparedness program to ensure the County and its partners are prepared to respond to a wide variety of emergencies. We performed this audit to determine if Maricopa County is prepared to respond to an emergency. Specifically, we reviewed the adequacy of the County's 2018 Emergency Operations Plan, the emergency operations center, emergency preparedness training, continuous operations plans, and procedures for completing after-action reports.

Being prepared to respond to an emergency requires the coordination of many federal, state, and local agencies and jurisdictions. In Maricopa County, MCDEM serves as the lead agency for planning and coordinating response efforts. The Emergency Preparedness program encompasses MCDEM's efforts to: (1) identify hazards/risks likely to impact Maricopa County, (2) prepare emergency response plans and procedures to address those hazards/risks, (3) provide emergency response training, and (4) lead the County's response during Federal Emergency Management Agency (FEMA) test exercises concerning the Palo Verde Nuclear Generating Station.

Key Findings

- The County's Emergency Operations Center (EOC) had adequate space, equipment, and resources for most day-to-day operations and test exercises. However, the EOC may not be adequately suited for an actual emergency event.
- The County's Emergency Operations Plan is an "all hazards plan" that contains formal plans and procedures for responding to all potential natural, human caused, and nuclear disasters likely to occur within Maricopa County.
- MCDEM provides annual training and emergency response simulation test events. Most partner agencies appear to voluntarily attend these events; however, MCDEM does not have the authority to require attendance by partner agencies.

What We Audited

Below is a summary of work performed and findings. Corresponding recommendations and responses start on page 4. The responses were approved by Robert Rowley, Director of Emergency Management, on May 5, 2019. More detailed observations and recommendations were communicated to management throughout the audit process.

Emergency Operations and Hazards Mitigation Plans

Background – Annually, MCDEM prepares an Emergency Operations Plan (EOP) that requires approval from the Board of Supervisors. The EOP formally documents the County’s plans for preparing and responding to a variety of hazards and emergencies that may occur within Maricopa County. MCDEM also prepares a Multi-Jurisdictional Hazard Mitigation Plan (Hazard Mitigation Plan) that assesses the likelihood and impact of potential natural hazards. The Hazard Mitigation Plan is updated once every five years.

Observations – We reviewed the 2015 Hazard Mitigation Plan and found that MCDEM partnered with 27 local jurisdictions and other organizations to incorporate their input in identifying the included natural hazards. The plan was approved by the Federal Emergency Management Agency (FEMA) before becoming effective in December 2015.

MCDEM has developed and tested the County’s Emergency Operation Plan in order to prepare for emergencies that are likely to occur within Maricopa County.

We found that the structure and elements of the County’s 2018 EOP aligned with federal and state standards and included 15 emergency support functions, each with a distinct focus area (e.g., communications, emergency management, resources support, external affairs, public safety and security). We mapped each potential hazard identified in the Hazard Mitigation Plan to the EOP and found the County should be able to respond to any hazard by activating one or more of the 15 emergency support functions. As part of FEMA observed and graded exercises, the County routinely activates and tests most of the emergency support functions included in the EOP.

Emergency Operations Center and Continuity of Operations

Background – The MCDEM Emergency Operations Center (EOC) is housed in an underground fallout shelter constructed in 1953 and serves as the primary facility where emergency response efforts are coordinated if a disaster or hazard occurs in Maricopa County.

Observations – We observed test exercises in February and March 2019 and found the EOC had adequate space, equipment, and resources for most day-to-day operations and test exercises. However, the EOC was not compliant with the Americans with Disabilities Act (ADA) and did not meet recommended U.S. Department of Defense design standards (**Recommendation 1**). The facility’s thick concrete reinforced walls, use of asbestos construction materials, and underground location have prevented structural updates and renovations. As a result, the facility may not have safe and sufficient work stations, conference rooms, space, and facilities to accommodate essential personnel in an actual emergency.

The County’s EOC had sufficient space, equipment, and resources for most day-to-day operations and test exercises. However, the EOC may not be adequate during an actual emergency event.

We also reviewed MCDEM’s 2017 Continuity of Operations plan and found that MCDEM has established intergovernmental agreements with several local jurisdictions that can provide an alternative EOC site in the event the MCDEM EOC becomes inoperable for any reason. Additionally, the Continuity of Operations plan identified back-up personnel to succeed the MCDEM Director and other key personnel.

Contingency plans are adequate to continue operations during an emergency response.

The MCDEM facility had sufficient backup electrical power, fuel, water, and administrative supplies to maintain the EOC for at least 15 days of sustained use. However, the EOC did not have sleeping facilities or food supply storage. Additionally, MCDEM did not maintain written policies and procedures regarding the backup generators and other resources (**Recommendations 2 and 3**).

Emergency Preparedness Training

Background – Effective emergency response requires the coordinated efforts of federal, state, county, local, and tribal agencies as well as numerous nongovernmental entities (e.g., hospitals, utility companies, volunteer agencies). MCDEM staff must be capable of leading and coordinating the efforts of multiple partner agencies. The partner agencies must be capable of completing the duties and responsibilities required by their assigned emergency support function(s), and of using common communications software and protocols

Observations – Annually, MCDEM prepares a training plan to facilitate the coordination of emergency management training events and exercises for MCDEM staff and partner agencies. We compared 2016 – 2018 training records to the documented training requirements. We found that MCDEM staff were trained to respond to emergencies met all training requirements of the Emergency Management Performance Grant (a key MCDEM funding source). However, some training exercises required by the annual training plan were not completed.

Most partner agencies voluntarily attend training events and exercises; however, MCDEM does not have the authority to require agencies to attend.

We also found that most partner agencies attended MCDEM-sponsored trainings even though MCDEM does not have the authority to require their attendance. We confirmed that on an annual basis, MCDEM requires each partner agency to formally attest that their agency has the required expertise, skills, and knowledge to perform the duties and responsibilities required by their assigned emergency support function(s) as defined in the EOP. However, MCDEM did not maintain formal policies and procedures regarding training and documentation requirements (**Recommendations 4 and 5**).

Emergency Event After-Action Reports

Background – After-action reports are formal evaluations that document lessons learned and assess an agency's ability to meet core objectives during a training exercise or actual event. The report also identifies the agency's strengths and opportunities for improvement.

Observations – We reviewed test exercises and activations of the MCDEM Emergency Operations Center (EOC) for the period of January 2017 – March 2019 and found that after-action reports were completed for most events. However, MCDEM did not have formal after-action reporting procedures describing when a report is required. This resulted in after-action reports not being completed for some events, including two 2017 EOC activations. In addition, many of the reports were missing information recommended by the Department of Homeland Security Exercise and Evaluation Program (**Recommendation 6**).

After-action reports were completed for most events, however, some events did not have a report or the report was missing recommended information.

Additional Information

This audit was approved by the Board of Supervisors and was conducted in conformance with International Standards for the Professional Practice of Internal Auditing. This report is intended primarily for the County Board of Supervisors, County leadership, and other County stakeholders. However, this report is a public record and its distribution is not limited.

If you have any question about this report, please contact Mike McGee, County Auditor, at 602-506-1585.

Recommendations and MCDEM’S Responses

Recommendations	Responses
<p>1 Work with the County Facilities Management, Risk Management, and Budget departments to evaluate the need for a plan that addresses ADA access, space limitations, and facility safety and condition concerns related to the MCDEM facility and Emergency Operations Center.</p>	<p>Concur – in progress</p> <p>Emergency Management will work with Facilities Management, County Management, and the Board of Supervisors to determine the feasibility of the three options and possible inclusion in a future capital improvement plan. This is a complicated solution and for the purposes of this action plan, a time period of 4 years will be assumed.</p> <p>Target Date: 6/30/2023</p>
<p>2 Adopt and maintain written policies and procedures regarding the maintenance, storage, rotation, testing, and use of backup resources (e.g., emergency generators, fuel, water, administrative supplies).</p>	<p>Concur – In progress.</p> <p>MCDEM is updating the Emergency Management Policy and Procedures section titles “Fuel Testing” and “Water Testing” and creating a policy and procedure for emergency generators.</p> <p>Target Date: 7/31/2019</p>

Recommendation	Responses
<p>3 Perform a risk analysis to consider maintaining resources to sustain habitation (e.g., food, sleeping areas). If warranted and cost effective, adopt and incorporate into the written policies and procedures.</p>	<p>Concur – completed</p> <p>A risk analysis was conducted internally and based on most commonly occurring hazards as well as potential or uncommon hazards. Determination was that maintaining resources for staff habitation of the MCDEM facility was both not necessary and not possible based on the current facility configuration and limitations.</p> <p>Target Date: Completed</p>
<p>4 Adopt and maintain formal, written policies and procedures regarding required training for MCDEM staff and partner agencies.</p>	<p>Concur – In progress</p> <p>Policy and Procedures “MCDEM Staff Minimum Training (5/28/2019)” was created. This policy mandates new employees complete the Emergency Management New Team Member Orientation Checklist within 180 days. It also states who is responsible for ensuring the checklist completion, as well as how the record is maintained. Policies and procedures related to partner agency training are being drafted.</p> <p>Target Date: 7/31/2019</p>
<p>5 Update the Emergency Operations Plan to require attendance of partner agencies at MCDEM provided training.</p>	<p>Concur – completed</p> <p>The Maricopa County Emergency Operations Plan has been updated to include recommended training for EOC staff members and partner agencies.</p> <p>Target Date: Completed</p>
<p>6 Adopt and maintain written policies and procedures regarding the completion of after-action reports and required content.</p>	<p>Concur – In progress</p> <p>The Maricopa County Emergency Operations Plan (EOP) addresses when After Action Reviews are required. However, there was a discrepancy as to how these would be completed between the Base Plan of the EOP, and the Maricopa County EOC Standard Operating Procedures (MCEOC SOP). The language resulting in the discrepancy will be removed from the MCEOC SOP. Policies and procedures regarding other AAR requirements are being drafted</p> <p>Target Date: 7/31/2019</p>