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Standard Guide for Emergency Operations Center (EOC) Development[1]

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1. Scope

1.1 This guide provides general guidelines for the development of an emergency operations center (EOC).

1.2 An EOC may be developed by either the public or private sector in response to the demonstrated or predicted need for a designated facility at which those involved in emergency/disaster management and the coordination of response and recovery efforts work.

1.3 This guide may also serve as a foundation for larger facilities such as a regional operations center (ROC) or state operations center (SOC) with a broader area of responsibility and more extensive needs to communicate and coordinate with others.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *NFPA Standards:*[2]

NFPA 90A Standard for the Installation of Air Conditioning and Ventilating Systems

NFPA 90B Standard for the Installation of Warm Air Heating and Air Conditioning Systems

NFPA 110 Standard for Emergency and Standby Power Systems

NFPA 220 Standard on Types of Building Construction

NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communication Systems

NFPA 1561 Standard on Emergency Services Incident Management System

NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs

NFPA 5000 Building Construction and Safety Code

2.2 *Other Standards:*

ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures[3]

CPG-101 March 2009 (Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans)

NIMS December 2008 (National Incident Management System)

NRF January 2008 (National Response Framework)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *authority having jurisdiction (AHJ), n*—the organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. **NFPA 1561**

3.1.2 *entity, n*—governmental agency or jurisdiction, private or public company, partnership, nonprofit organization, or other organization that has emergency management and continuity of operations responsibilities. **NFPA 1600**

3.1.3 *established EOC, n*—facility temporarily created to manage or coordinate emergency operations or like functions.

3.1.4 *standing EOC, n*—existing fixed facility that serves as a location for entities to manage or coordinate emergency operations or like functions.

3.2 *Acronyms:*

3.2.1 *ADA*—American with Disabilities Act

3.2.2 *AHJ*—Authority Having Jurisdiction

3.2.3 *ARC*—American Red Cross

3.2.4 *BCM*—Business Continuity Management

3.2.5 *CERT*—Community Emergency Response Team

3.2.6 *COG*—Continuity of Government

3.2.7 *COOP*—Continuity of Operation

3.2.8 *COTS*—Commercial-Off-The-Shelf

3.2.9 *EOC*—Emergency Operations Center

3.2.10 *FEMA*—Federal Emergency Management Agency

3.2.11 *HVAC*—Heating, Ventilation, and Air Conditioning

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[2] Available from National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, http://www.nfpa.org.

[3] Available from American Society of Civil Engineers (ASCE), 1801 Alexander Bell Dr., Reston, VA 20191, http://www.asce.org.

3.2.12 *ICS*—Incident Command System
3.2.13 *IST*—Incident Support Team
3.2.14 *IT*—Information Technology
3.2.15 *JIC*—Joint Information Center
3.2.16 *JIS*—Joint Information System
3.2.17 *MRC*—Medical Reserve Corps
3.2.18 *NEMA*—National Emergency Management Agency
3.2.19 *PC*—Personal Computer
3.2.20 *PIO*—Public Information Officer
3.2.21 *PSAP*—Public Safety Answering Point
3.2.22 *ROC*—Regional Operations Center
3.2.23 *SAR*—Search and Rescue
3.2.24 *SOC*—State Operations Center
3.2.25 *USAR*—Urban Search and Rescue

4. Summary

4.1 It is recognized that a "one size" approach will not fit all jurisdictions. EOCs need to be developed and maintained based on the risks, vulnerabilities, capabilities, and needs of the entity. For example, some areas do not need to have seismic or hurricane response capability. However, there are common functional elements such as communications and work space that every EOC needs. This standard guide addresses processes and procedures for the development of a new EOC facility or the modification of an existing facility.

4.2 With these considerations in mind, a tiered approach should be taken that allows an entity to develop an EOC based on the particular needs and constraints of that organization and location while considering guidelines necessary for potential growth. It is important to recognize the need for alternative or backup facilities. Thus, this standard guide provides guidance for developing redundant resources.

5. Significance and Use

5.1 A critical part of developing an emergency management capability is establishing and preparing to operate an EOC. A well-designed EOC, coupled with well-trained personnel, will enable the coordination of response and recovery activities. An EOC can serve as an effective and efficient facility for coordinating all emergency response efforts and will optimize emergency communications and information management. This standard guide is intended to provide the emergency management community with practical concepts and approaches to develop an effective EOC.

6. EOC Development

6.1 *Needs Assessment*—Before beginning the planning and development of a new permanent EOC or modification of an existing EOC, a needs assessment should be conducted that includes hazard identification, risk analysis, and capability assessment. The emergency management requirements of the jurisdiction should be based on the identified hazards and the types of incidents that are anticipated for the entity, the severity of the resulting impacts of those incidents, and the possibility of their occurrence. Other important factors are the size and type of the jurisdiction. A highly urbanized area, due to its high volume of commercial and industrial infrastructure, broad spectrum of land uses, and size of potentially-impacted populations, would require greater resources than a small rural area. However, rural areas in which unique industrial or large Federal facility operations are located may have specific risks and hazards that would have a direct impact on the size, scope, and need of an EOC facility. Additionally, a capability assessment is needed for the entity to determine whether locally available resources can respond adequately to the range of specific incidents identified in the hazard and risk assessment. It is extremely important for an entity to know the limits of the resources (personnel and equipment) under its jurisdiction.

6.2 In determining the need for, planning of, and development of an EOC, it is important to review and incorporate the emergency management and response guidance and requirements of NFPA 1600, NFPA 1561, the NIMS December 2008, the NRF January 2008, and CPG-101 that are applicable to an EOC's design and development.

6.2.1 *Hazard/Threat Identification and Assessment*—This reflects a comprehensive analysis of the types of hazards associated with incidents that the jurisdiction might need to manage. It reflects not only the most likely events, but also those that are less likely to occur but would have significant consequences if they occurred.

6.2.2 *Risk Analysis*—This is a process in which the hazards identified in 6.2.1 are ranked based on the likelihood that they might occur, as well as the significance of the consequence should they occur. This can be a numeric rating or qualitative rating, such as likely, very likely, or less likely. The highest-scored hazards are addressed first and the lowest-scored addressed last. The degree of impact (that is, consequence) is included in the analysis for each threat. A less likely threat (low frequency of occurrence) may have a higher impact if it were to happen, and that may affect the urgency of response for that threat. The following definitions of likelihood terms can be used as a guide: An incident or event deemed "likely" to occur has a greater than 66 % probability of occurring. A "very likely" result has a greater than 90 % probability. "Extremely likely" means greater than 95 % probability, and "virtually certain" means greater than 99 % probability.

6.2.2.1 *Vulnerability Assessment*—Once hazards are identified, the vulnerability assessment is applied to determine which potential incidents or events need to be considered when establishing an EOC. For example, the Authority Having Jurisdiction (AHJ) would not want to place the EOC in an area where routine flooding occurs when it has identified flooding as a high risk, unless the facility is specifically needed in that location and sufficiently protected from such risk.

6.2.3 *Emergency Management Operations*—Consider the aspects of emergency management operations that help define an AHJ's need for an EOC.

6.2.3.1 *Consequence Management*—Consider the impact or result of an incident, which is the primary focus of EOC activities. Each agency in the jurisdiction determines how each identified incident is addressed and determines what is needed

in terms of space allocation, equipment needs, facility systems, or other requirements of a supporting EOC.

6.2.3.2 *Capability Assessment*—A capability assessment reviews the ability of a government, individual or company to address identified hazards. Such an assessment should review technical ability, financial resources, legal and institutional frameworks and political will. A capability assessment can reveal gaps in existing capability for hazard response and development control, as well as highlight currently functioning mitigation activities. This assessment can help identify policy and structural changes that must be made to institutionalize mitigation. Some mitigation options may be eliminated from consideration due to barriers to implementation identified during the capability assessment. This is the AHJ's determination of its capability to provide actions and resources, and to what level these needs can be addressed by the AHJ. This will help determine the size and scope of the EOC facility.

6.2.3.3 *Legal Responsibility*—Incorporates the AHJ's review of all applicable laws, policies, and procedures that shape the framework of the AHJ's emergency management responsibility. This review should specifically identify any legal aspects required of the jurisdiction,, what equipment is required, and any laws that address construction or facility requirements.

6.2.3.4 *Vision*—This defines the long-term view of what the AHJ believes needs to occur in an ideal setting. Understanding that, the AHJ must be willing to make decisions based on issues such as cost/benefit and overall financial capabilities. A typical EOC organization vision statement addresses topics such as direction and control, situational assessment, coordination, priority establishment, and resource management.

6.2.3.5 *Mission*—This defines what the AHJ believes is the overall purpose of the EOC organization being established.

6.2.3.6 *Facility Occupancy*—Occupancy can vary. The entity's EOC facility could be a stand-alone building or in a shared facility (that is, jointly with a police or fire department or the 911 center) or just a room that has been designated in an existing facility. It can be a dedicated EOC facility (permanently set up for immediate use) or one that has been modified to accept equipment and personnel (for example, prewired for additional phone lines).

6.2.3.7 *Facility Use*—In many cases, the EOC can be designed for multiple uses. This may include a training room, conference room, and storage. Some facilities are dedicated and therefore reserved solely for use as an EOC. The EOC can be located within a larger facility that may include usage by other organizations or departments. Consider that the EOC design plan has the option of converting normal use of space into another type of use during an incident, or as the incident requires more personnel at the facility and more space is needed. Planned use of sliding room divider walls in facility design may provide more flexibility in facility use. Alternate planned space usage during an incident can also impact facility planning regarding changes in levels of security for different areas, space requirements, storage needs, locations and size of restroom facilities, power and other utility needs, communications and other technology, vehicle parking, and other such issues.

6.2.3.8 *Facility Functionality*—The key to functionality is that it works for the organizations using it. Whether the facility is dedicated or multi-use, the objective is to be able to meet the needs of the organization in the role of an EOC. For some, this might be a compromise between what is seen as ideal and what is realistically possible. The AHJ should ensure that all partners who use the facility have the opportunity to provide input.

6.3 *Create an EOC Design Team*—The design team should be inclusive rather then exclusive. The AHJ may want to establish a core team of key individuals who will do most of the groundwork and will have final approval authority, but the overall size of the team should not be limited.

6.3.1 *Identify Team Members*—The team should be comprised of members who may or will participate in operations within the EOC.

6.3.1.1 *Include the Public Sector*—Include the primary public sector agencies and departments within the entity's jurisdiction that would operate in the facility during an emergency. Even if the facility belongs to a private entity, the public sector can provide guidance, input, and possibly a liaison to the entity's facility. Some of the most overlooked public sector representatives are legal counsel and design professionals.

6.3.1.2 *Include the Private Sector*—With the growing emphasis on the essential role of the private sector in a disaster/emergency, it is critical to get the private sector involved. The AHJ may wish to include either a seat for a liaison or, in some cases, a separate room for a private sector operations center (this may be especially important in larger urban or state EOCs). Participation should be limited to private sector entities with mature EOCs and those that can provide needed support to other response entities such as telecom providers, grocery chains, hospitals, and long-term care facilities.

6.3.1.3 *Include Nongovernmental Organizations*—Nongovernmental organizations (NGOs) such as the American Red Cross, licensed and trained amateur radio operators or other such emergency response trained volunteer organizations may need to have a regular seat in the EOC. It is important to address their specific needs to ensure they can operate with maximum efficiency in the EOC facility.

6.3.1.4 *Include Faith-based Organizations*—Many faith-based organizations take a very active role in disaster response and preparedness and may need to be considered in EOC planning.

6.3.2 *Identify Team Structure*—Identify a team leader early in the process, and establish both a core team and a larger more inclusive review team. Utilize people's strengths and responsibilities using organizational mechanisms such as a steering committee, advisory board, and technical committee.

6.3.3 *Identify Team Support Resources*—Identify resources the team will need. Ensure that the AHJ includes sufficient staff to support the team. The AHJ may wish to hire full-time administrative support staff.

6.3.4 *Create a Meeting Schedule*—Create a timeline for the project and then develop a meeting schedule that will support the timeline but will not become a burden to team participants.