Unit 8:
EOC Design, Technology, and Equipment

Unit Terminal Objective

Explain the location, design, equipment and technology considerations for the EOC.





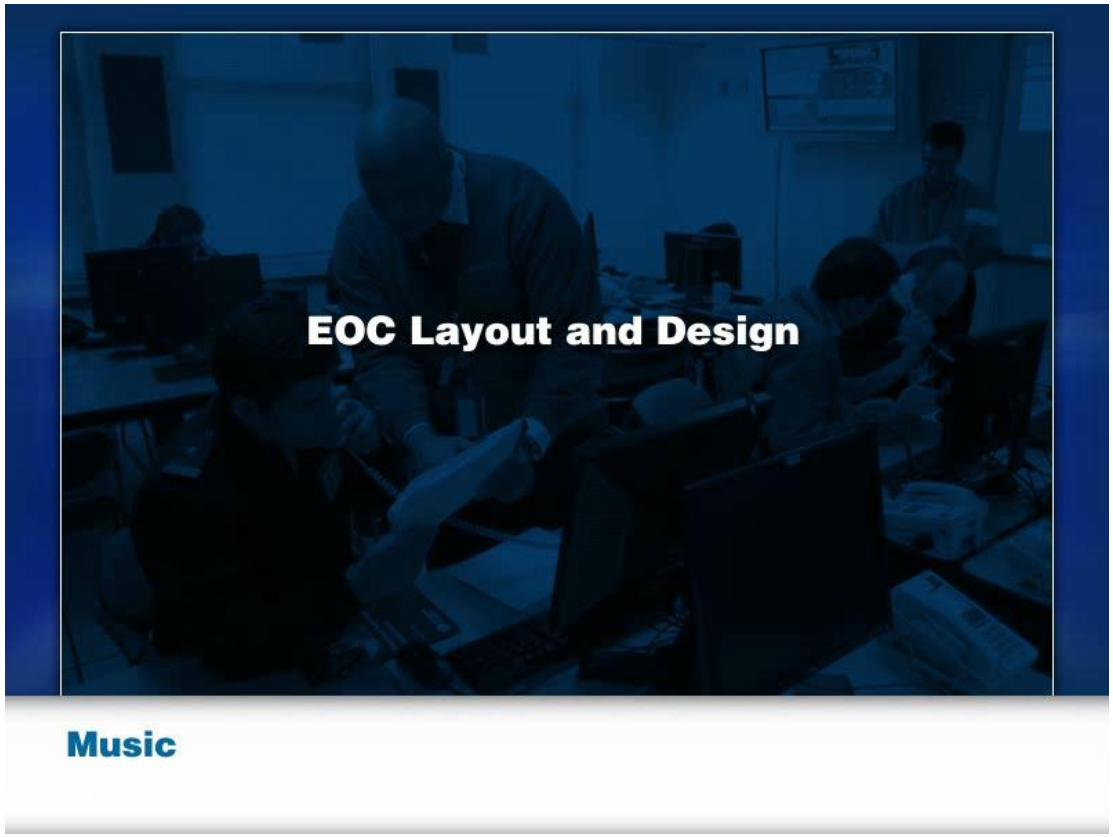
Unit Enabling Objectives

- Identify requirements for EOC location(s).
- Explain the relevance of proper design and layout of an EOC.
- Identify requirements for successful EOC communications.
- Explain the emerging role of technology and innovation in the EOC.

EOC Facilities

- **Are all shapes and sizes.**
- **May reflect the community's investment in emergency management and disaster preparedness.**
- **Locations can be physical or virtual.**

EOC Layout and Design

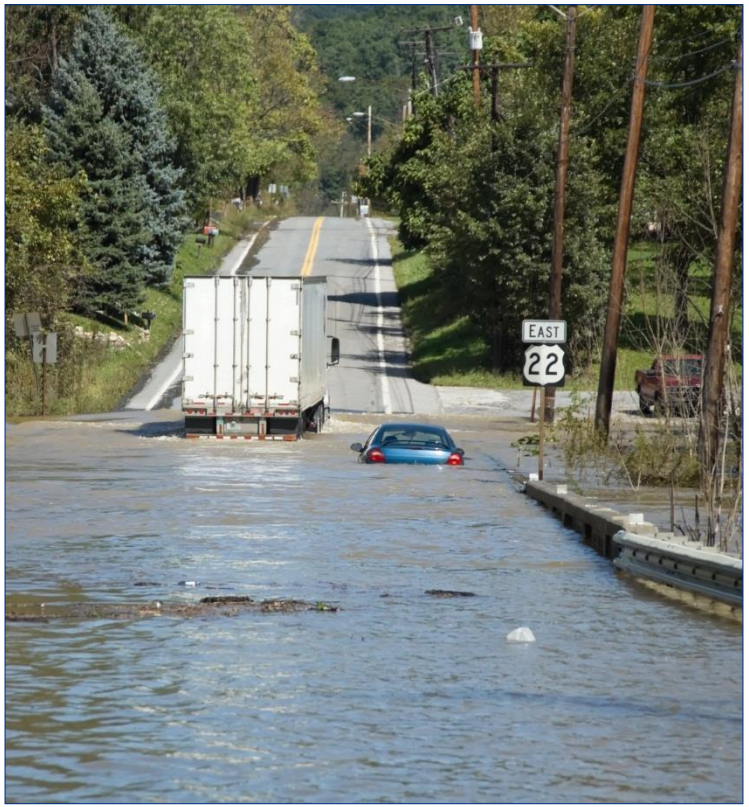


EOC Factors

- Accessibility
- Safety
- Size
- Available Infrastructure
- Survivability
- Versatility

Importance of Accessibility

Key staff, suppliers, and support personnel must be able to travel to the EOC during or following an incident.



Accessibility Review

- Is the EOC accessible, regardless of hazard or threat (be scenario specific)?
- Can key personnel walk to EOC under extreme circumstances?
- Could staff access meals and other amenities?
- Would new threats or developments pose risk to EOC?
- How would future growth impact the EOC?

EOC Safety

Make sure the EOC is safely located away from:

- **Natural and technological hazards.**
- **Cascading events.**
- **Identified or potential terrorist targets.**

EOC Size

- **What are your jurisdiction's EOC staffing requirements?**
- **Look at your activation levels.**
- **How many people are needed for a full activation?**
- **What is ideal number of rooms needed?**

Staffing: Normal Operations

- Can be modified to fit the incident.
- Sections and Units may be combined.
- Functions can be on standby.

Handout 8-1: Organizational Charts for EOC Activations

Staffing: Partial and Full Activation

Partial

- Complexity of developing or intensifying incident conditions.
- Amount of resources being requested.
- Number of ESFs the EOC will activate.
- Other external agencies manning EOC functions.

Full

- Note where expansion has taken place.
- Command now has several elements present in the EOC, including a PIO function.

Options: If the EOC is Too Small

- Consider departmental or partner jurisdiction EOCs (public works, fire, law enforcement, etc.).
- Discuss the option of conducting EOC operations "virtually."

FEMA Region X has conducted several activations of the Regional Response Coordination Center (RRCC) virtually, in support of the State of Alaska and remote impacted communities.

EOC Layout/Design Considerations

- Number of rooms and proximity of work spaces.
- Visibility between key staff.
- Sufficient distance between staff to reduce noise levels.
- Easy access to food, water, and the facilities.
- Properly locating support technology (copiers, GIS).

Handout 8-2: EOC Design and Layout Checklist

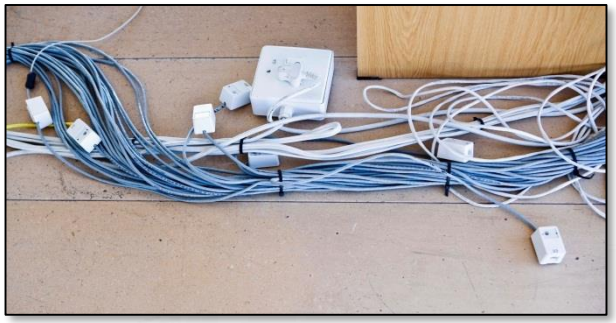
EOC Equipment and Rooms

- What type of equipment will routine EOC staff use?
- How is the equipment configured?
- Is the space sufficient for additional equipment required to ensure interoperability and redundancy?
- Is there space for breakout meetings, press conferences, eating, and resting?

Available Infrastructure

Available infrastructure should include:

- **Heating, ventilation, and air conditioning**
- **Water, electricity, and natural gas**
- **Internet and satellite capability**
- **Telephone land lines**
- **Hygiene/sanitation**
- **Accessibility**



Survivability

An EOC needs to remain operable for an extended period of time, regardless of the size and scope of an incident.

Alternate EOCs

All jurisdictions should have an alternate EOC.

Use the same factors to select the alternate EOC location:

- Accessibility
- Safety
- Size
- Available Infrastructure
- Survivability
- Versatility

Ref: Continuity of Operations (COOP) Federal Continuity Directive 1 (FCD 1)

Handout 8-3: Acquisition of Alternate Facilities

Helpful Hint: Alternate EOCs

Begin by considering facilities operated by public safety and departmental partners, such as:

- **Public works,**
- **Fire districts/departments**
- **Other emergency management agencies.**

Your partners may already have an existing operations center available for your use.

Versatility

Effective EOCs are:

- **Able to adapt to a variety of incidents and disasters.**
- **Suited to a community's needs and risks**

Versatility Continuum

Highest Cost

Lowest Cost

Hot: Fully equipped, utilities working, shortest startup time.

Warm: Some systems/ equipment in place, moderate startup time.

Cold: Not equipped, utilities not working, longest startup time.

EOC Interoperability and Redundancy

NIMS best practices for communications:

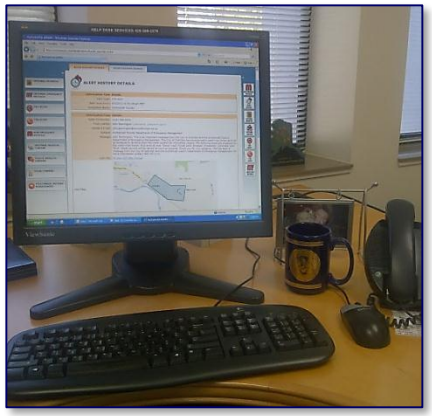
- **Interoperability**
- **Redundancy**

Interoperability: Definition

The ability of public safety service and support providers to communicate with staff from other responding agencies and to exchange voice and/or data communications on demand or real time.

- National Task Force on Interoperability

Redundancy: Backup Systems Requirements



Backup systems must:

- **Be available to all assisting agencies.**
- **Work in a variety of situations or conditions.**
- **Be able to accommodate secure communications, where necessary.**
- **Be tested regularly.**

Integration of Technology

While not replacing face-to-face communications, technology integrated into routine operations can be very effective.

Emerging Technology in the EOC

- Real-Time EOC Management Software
- GIS
- UAS
- Mobile Devices
- Enhanced radio systems
- Documentation systems
- Reverse notification products and programs

Activity 8.1: EOC Design

Allotted Time: 1 hour 15 minutes

Objectives Review

1. What are factors to consider when searching for an EOC location?
2. What is the significance of a properly designed EOC? Why is layout so important?
3. How do interoperability and redundancy align with effective communications within an EOC?
4. What are a few examples of emerging technologies? How do they enhance EOC operations while simultaneously saving costs?