

# Continuity of Operations & Disaster Recovery Planning

**CAPS** 2020  
Conference for Advancing Public Safety

# Agenda

- Introduction
- Assessing and controlling risk
- What is a Continuity of Operations (COOP) Plan?
- The COOP planning process
- Developing a COOP plan
- Information technology and disaster recovery
- Resources

## Introduction

Communities place a high level of trust in 911 systems and the ability of public safety agencies to deliver services regardless of emergency circumstances

Public safety personnel, facilities, communication infrastructure, and equipment are vulnerable to a wide-range of hazards and threats

The Emergency Services Sector was designated as Critical Infrastructure under *Presidential Policy Directive (PPD)-21 Critical Infrastructure Security and Resilience*



# Emergency Services Sector Preparedness

The Nation's critical infrastructure provides the essential services that underpin American society. Proactive and coordinated efforts are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure – including assets, networks, and systems – that are vital to public confidence and the Nation's safety, prosperity, and well-being. (PPD-21)

The mission of the Emergency Services Sector is to save lives, protect property and the environment, assist communities impacted by disasters, and aid recovery during emergencies.

Emergency service organizations must continue to function during emergency events.



# Assessing and Controlling Risk

## What is Risk?

Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences

Resiliency is the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from a disruption

Risk exposure is the interaction with a potential hazard or threat



# How Risk Exposure is Assessed

Risk exposure is assessed based upon the probability of loss or damage and is a function of four variables:

1. **Threat** - natural or man-made occurrence or act that has the potential to harm life, information, operations, the environment, and/or property
2. **Criticality** - importance of an asset to the organization's mission or essential functions
3. **Vulnerability** - an asset's resilience to the impacts of a hazard or threat
4. **Recoverability** - the time and effort required to restore operational capacity

# Controlling Risk

- Vulnerability is reduced through the implementation of prevention measures or controls
- Prevention measures may be in the form of physical devices, policies, or procedures
  - Physical controls typically involve environmental features
    - Access control, surveillance systems, fencing, identification badges
  - Procedural controls are behavioral-based in nature
    - Background checks, password management, access rights



# Identifying Hazards and Threats

## Hazard and threat Identification

Natural Hazards	Technological Hazards	Human-Induced Threats
<ul style="list-style-type: none"> <li>• Hurricane</li> <li>• Tornado</li> <li>• Flooding</li> <li>• Earthquake</li> <li>• Tsunami</li> <li>• Wildfire</li> <li>• Pandemic disease</li> <li>• Winter storm</li> </ul>	<ul style="list-style-type: none"> <li>• Energy failure</li> <li>• Structure fire</li> <li>• Hazardous materials release</li> <li>• Water system failure</li> <li>• Tower collapse</li> <li>• Network outage</li> <li>• Cable cut</li> <li>• Transportation incident</li> <li>• Supply chain disruption</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace violence</li> <li>• Civil unrest</li> <li>• Cyber attack</li> <li>• Terrorism*</li> <li>• Sabotage</li> </ul>

\**Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE)*

What is a Continuity of Operations Plan?

## Elements of a COOP Program

1. A COOP program manages a continuous process that is responsive to evolving risks, emergency events, mitigation of impacts, and guided recovery
2. The jurisdiction's emergency operations plan (EOP) is intended to support the needs of the community during an disaster
3. The COOP plan is a separate document that is intended to support the internal operations of organizations during an emergency or disaster
4. Continuity of operations planning utilizes a standard methodology and is conducted in compliance with applicable regulations, rules, or guidelines
5. An individual is typically assigned to lead the COOP efforts who has the desire and training to direct a successful program

# Emergency Services Continuity of Operations

## Continuity of Operations (COOP) Plan

A COOP Plan is a *tool* that is intended to aid an organization in preparing for, responding to, and recovering from a disruptive event.

### Emergency Services Preparedness Goals:

1. Assure the ability of an organization to maintain operational capacity during and emergency or disaster
2. Continue to provide essential services to the community throughout an emergency or disaster event

#### **CONTINUITY OF OPERATIONS**

AN EFFORT TO ENSURE THE STABILITY OF CRITICAL GOVERNMENT FUNCTIONS DURING A WIDE RANGE OF POTENTIAL EMERGENCIES OR DISRUPTIVE EVENTS

# The Continuity of Operations Planning Process

# The Continuity Planning Cycle

**Prevention** – Measures intended to avert or minimize probability of occurrence and related impacts

**Preparedness** – Activities intended to enhance organization’s capacity to protect itself from the effects of an emergency incident

**Response** – Actions initiated to mitigate the immediate effects on emergency services through use of planned procedures and resources

**Recovery** – Short and long-term actions that are intended to restore operational capacity



# The COOP Planning Process

- The COOP planning process is a valuable educational exercise for organizations
- COOP planning is intended to aid the organization by:
  - Identifying hazards and threats that could impact the operational capacity of the organization
  - Developing mitigation strategies, or controls, to prevent or lessen the impact that a disruptive event may have on operations
  - Promoting an orderly and timely recovery and resumption of normal service levels

# Developing a COOP Plan



# COOP Planning Considerations

- What are the mission essential functions (MEF) of the organization?
- What positions are critical to carrying out each MEF?
- What resources are necessary to enable staff to carry out essential functions?
- What facilities and infrastructure are necessary to support the essential functions?
- How would essential functions continue with the loss of personnel, resources, or facilities?



An organization's resiliency  
is directly related to its  
continuity capability

# Developing a COOP Plan

## Elements of the COOP Plan

- The front section of the plan is educational in nature and describes the purpose, planning methodology, hazards and threats, protective measures, plan maintenance, testing, etc.
- The actionable elements the of the plan are found in the Appendices including:
  - Succession and Delegation of authorities
  - Mission essential functions
  - Incident action plan (IAP) and pre-defined tasks
  - Devolution procedures
  - PSAP Evacuation and Relocation
  - Pandemic disease plan

# Developing a COOP Plan

1. Identify the organization's mission and supporting mission essential functions (MEF)
2. Identify all positions and define their roles and responsibilities in supporting mission essential functions
3. Identify inter-dependencies between positions, functions, and tasks-internal and external to the organization
4. Identify vendor/contractor services and determine their ability to provide support during a disruptive event (i.e. business continuity plans)
5. Conduct a risk assessment using a standard methodology to identify hazards and threats
6. Identify and adopt controls to mitigate risks (physical and procedural)
7. Develop disaster recovery procedures (staffing, facilities, communications, etc.)

## Developing a COOP Plan

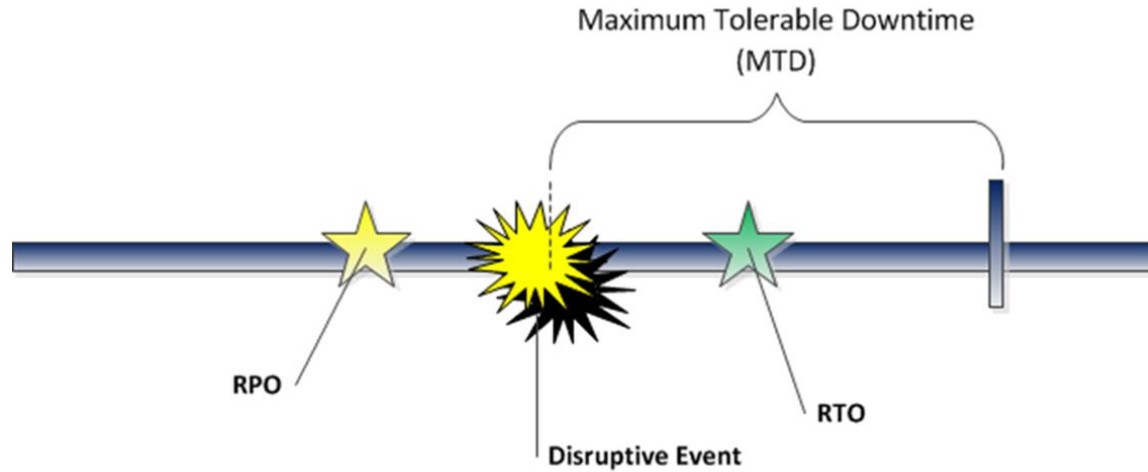
8. Develop information technology (IT) recovery procedures for all essential systems
9. Develop a staffing succession plan and associated delegation of authority policies
10. Define alternate work site (AWS) requirements, identify AWS facilities, and telework infrastructure
11. Develop and adopt of devolution of control and command procedures
12. Develop reconstitution procedures to restore workforce capacity
13. Train staff in use of the COOP plan and procedures
14. Test and assess the plan annually using exercises and document outcomes
15. Maintain and update the plan annually to reflect changes in risks, resources, essential functions, and the outcomes of exercises and actual events

# Information Technology & Disaster Recovery

# Information Technology & Disaster Recovery

- Identify the organization's critical and essential systems, hardware, applications, and network infrastructure
- Identify and categorize all records and data
- Adopt data and record preservation methods and procedures (i.e. archival backup and restoration procedures)
- Implement physical and policy-based protective controls for IT systems and infrastructure
- Adopt recovery procedures for each system and application

# Information Technology & Disaster Recovery



- Determine Maximum Tolerable Downtime (MTD) for each system and application
- Define the Recovery Point Objectives (RPO)
- Define the Recovery Time Objectives (RTO)
- Adopt recovery strategies necessary to achieve the objectives

# Resources



# Continuity of Operations Resources

- FEMA Continuity Guidance Circular for Non-Federal Entities
- NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs
- NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
- NENA 53-001 Communication Center/PSAP Disaster and Contingency Plans
- NENA 53-501 Hazard and Vulnerability Analysis
- NENA 04-503 Network/System Access Security
- APCO/NENA ANS 1.102.2-2010 PSAP Services Capability Criteria Rating Scale
- NIST 800-184 Guide For Cybersecurity Event Recovery

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