Continuity of Operations Plan (COOP)

Development Guide

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Rev 2.0

Table of Contents

1. Introduction

The Tennessee Emergency Communications Board (TECB) created this Continuity of Operations Plan (COOP) Development Guide to assist local Emergency Communications Districts (ECDs) and their respective Public Safety Answering Points (PSAPs) or Emergency Call Centers (ECCs) (herein referred to as PSAPs) with the development of their COOP plans and the procedures used during, and to recover from disasters and emergencies. Each PSAP should customize their COOP as needed. No COOP will be the same in every agency or district.

The success of the implementation of any plan depends on how well staff know and understand the guidance contained in the COOP. Therefore, each district is required to test the procedures outlined in the COOP.

In accordance with TECB Policy No. 09: District Minimum Operating Standards, all PSAPs in Tennessee shall:

> "Prepare and regularly test, at least annually, a PSAP Operations Continuity Plan that specifically provides procedures for on-duty personnel in the re-routing of 911 calls, switchover to back-up systems, evacuation plans, temporary call answering plans, return to normal plans, and other plans that minimizes the number or potential of unanswered 911 calls. Annually report to the Board the results of PSAP Operations Continuity Plan tests. The Tennessee Emergency Communications Board (the "Board") can provide, upon request, a model plan that can be customized for individual PSAPs".

This guide is intended to serve as a model plan, or template, that should be edited to meet the needs of local Emergency Communications Districts and PSAPs.

2. Objectives

The TECB, in concert with local ECDs, is committed to continuing all aspects of critical activities during emergencies or disasters. Additionally, the TECB and ECDs are concerned with safely and promptly resuming normal operations after an event.

The goal of developing and maintaining a COOP is to:

a. Ensure the safety of personnel, facilities, equipment and supplies during an emergency or disaster situation.
b. Prepare the PSAP for disaster situations.
c. Assist with planning for public notifications and procedures to be used when normal 911 operations are disrupted.
d. Increase the probability of maintaining functionality by planning, training, and exercising possible disaster scenarios.
e. Outline plans for the return to normal operations.

f. Review the execution of plans and exercises as part of ongoing process improvement and training.

With these goals in mind, the four phases of emergency management should be central to developing an effective COOP:

a. Mitigation

   Mitigation of disasters and emergencies is focused on the implementation of strategies and technologies that will maintain the ability of the PSAP to effectively answer and respond to calls for assistance during an incident.

b. Preparedness

   The PSAPs development of plans, procedures, including training and exercise of those plans and procedures in anticipation of disasters or emergencies.

c. Response

   The PSAPs ability to utilize those plans and procedures during a disaster or emergency to minimize the potential or effects of the incident on critical 911 operations.

d. Recovery

   The ability of the PSAP to implement procedures to safely return to normal operations, effect repairs and resupply of depleted or damaged equipment and materiel, and to document the incident and outcomes to improve existing plans.

2.1 FEMA National Preparedness System and Incident Command System

The National Preparedness System outlines an organized process for everyone in the whole community to move forward with their preparedness activities and achieve the National Preparedness Goal. The National Incident Management System (NIMS) guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents. PSAP leadership and staff members involved in COOP preparation and training should be familiar with NIMS. NIMS provides a guide highlighting how personnel should work together during incidents and provides stakeholders across the whole community with the shared vocabulary, systems, and processes to successfully deliver the capabilities described.

Local, state, territorial, and tribal nation jurisdictions are required to adopt NIMS to receive federal preparedness grants.

TECB staff have received training and have been certified on various subjects of NIMS. For those ECDs and PSAPs interested, the training is free and may be completed online through the

FEMA Emergency Management Institute. It is recommended that, at a minimum, PSAP management and staff complete the following Independent Study (IS) training courses:

- IS-100c: Introduction to the Incident Command System
- IS-200c: Basic Incident Command System for Initial Response
- IS-700b: An Introduction to the National Incident Management System
- IS-800d: National Response Framework: An Introduction
- IS-242b: Effective Communication

Prior to enrolling in any FEMA Independent Study course, each student must obtain a Student Identification Number (SID) by registering at: cdp.dhs.gov/femasid. Course information may be found at: training.fema.gov/is/crslist.aspx?all=true.

In addition to the federal resources available through FEMA, the Tennessee Emergency Management Agency (TEMA) provides documentation and assistance in planning and COOP preparation.

During a disaster or emergency, TEMA will "collect information from other Emergency Support Function-2 (communications) organizations and allied agencies and forward to other ESF for information and planning" and "assess impact of disaster on state emergency services communications capabilities and initiate procedures with other ESF-2 organizations to correct any identified deficiencies as soon as possible" (from Tennessee Emergency Management Plan (TEMP) December 2018).

3. Common Threats

There are numerous possible threats that could impact 911 operations in the state. Some of these are:

a. Floods
b. Ice/winter weather damage
c. Tornadoes/high wind damage
d. Lightning damage
e. Fire
f. Earthquakes
g. Landslides/mudslides
h. Extreme heat
i. Network disruption/isolation
j. Utilities disruption
k. Pandemic/illness
l. Terrorist activities/threats (especially those targeting critical infrastructure)
m. Nuclear, hazmat or other accidents
n. Malicious or harassing activity/threats
o. Crime and Cybercrime, extortion, hostage-taking/kidnapping, theft, etc.

Although this is not an exhaustive list of possible threats, all the above have occurred in the state and will likely occur again. Each individual district or PSAP should consider the possible impact

from each of the above and, based on experience, any additional threats that may not be categorized here.

4. Risk Analysis

A Risk Analysis is key to developing an effective COOP document. Each system, or sub-system, of a PSAPs operations may be impacted by the threats above or others not considered here. The level or amount of risk that management is willing to accept will determine what preparations will be needed and what actions will be appropriate at the time of an incident. Some of the primary tasks associated with a Risk Analysis are:

a. Identify the asset, system or operational unit used by the PSAP that may be impacted (e.g. Personnel, 911 Call-taking premise equipment, CAD, mapping systems, radio systems, facilities, etc.).
b. Determine the probability of the identified risks occurring. This is based on local leadership's experience and training and is more art than science. The frequency of tornadoes and their strength occurring over the past 10 years, for example, may help identify the level of risk of tornado damage at the PSAP.
c. Determine the effect or impact on operations from the identified threat in terms of dollars, personnel, equipment, time to repair/replace, etc.

A Risk Analysis can assist leadership in determining the current posture of 911 in the district. It is an orderly approach to identifying threats and evaluating the likelihood of them occurring and the amount of damage or interruption they could cause. This will allow officials to develop or modify long-range plans as well as maintain a COOP document that is realistic and helpful.

5. Technology to Mitigate Disasters

Specific technologies are available to assist the local PSAP in mitigating disasters or emergencies caused by interruptions in service. Some of these are listed below and should be considered when developing a COOP:

a. Redundancy

   The TECB is preparing for the expiration of the contract with our current NG 911 provider. As part of the anticipated contract award, redundant circuit connections to the ESInet will be provided to minimize interruptions to PSAP operations during primary circuit outages. This guide will be updated when the new contract is awarded.

b. Alternate Routing

   PSAPs may choose to alternately route their 911 calls to administrative business lines, landline or cellular phones designated as 'backup' lines, neighboring PSAPs

with whom interlocal agreements have been engaged or to backup centers. Multiple choices in alternate routing may be used, e.g. backup center circuits then, if not available administrative lines.

c. Telecommunications Service Priority

Telecommunications Service Priority (TSP) is a program that authorizes national security and emergency preparedness (NS/EP) organizations to receive priority treatment for vital voice and data circuits. The TSP program provides service vendors a Federal Communications Commission mandate to prioritize requests by identifying those services critical to NS/EP. A TSP assignment ensures that it will receive priority attention by the service vendor before any non-TSP service. For more information on TSP, go to: cisa.gov/telecommunications-service-priority-tsp or call 866-627-2255. Note that NG 911 circuits, administrative lines and those lines designated as critical to 911 operations should be identified for TSP.

d. Cloud Services

Maintaining off-site copies of files, logs, recordings, and other critical data may help to prevent loss if local servers and computers are damaged or rendered inoperable. Additionally, a hosted 911 telephone controller system is more likely to survive a local disaster or emergency, which will assist in mitigation and recovery of 911 service.

e. Survivable Power Systems

According to TECB Policy 9, PSAPs should have Uninterruptible Power Supply (UPS) systems capable of providing emergency power for up to one hour in the event commercial power is lost. The UPS is to be supported by a generator with a fuel supply capable of a minimum of 48 hours run time. This will allow PSAP management an opportunity to continue operations until commercial power is restored in many situations.

f. Backup PSAPs

A backup PSAP is preferred over routing calls to neighboring counties in most situations. However, a backup center is not always a cost-effective means of maintaining 911 operations. In some locations, sharing the costs of a backup facility between neighboring counties is more efficient, especially in areas where the same type of communications systems are used, such as NG 911 CPE and radio systems.

6. General Response Procedures

In order to gain situational awareness and to be ready to assist local districts and PSAPs, the TECB, in Policy 9, III.A. states "Each ECD or the agent(s) or designee(s) responsible for carrying out "operations of the district" shall notify the *Network Operations Center* designated by the Board of any misrouted 911 calls or any failure or decrease in the level of any type or degree of 911 service of a duration over, or predicted to be over, thirty (30) minutes. Such notices shall be provided as soon as practicable after the outage occurs or notice of a predicted outage is received to permit the Board to assist in the restoration of service, if appropriate. The Executive Director or the Executive Director's designee shall determine the Board's level of involvement, if any, in assisting ECDs, carriers and service providers in restoring the appropriate level of E-911 service."

Although the TECB Policy 9 is being updated to reflect recent changes related to the Network Operations Center and our NG911 network provider, outages should continue to be reported to the TECB. If an outage or network event impacts more than one district or PSAP, the TECB will assess the situation and make notifications to surrounding districts and to partner agencies as required.

The district or PSAP should also notify their local Emergency Management representative and other officials in accordance with local procedures.

7. Public Notification of Disasters and Emergencies

It is critical to have a communications plan that outlines procedures and messaging to inform the public if 911 service is not available. COOP documents should include information on media outlets, such as radio and television stations, social media platforms and public notification software systems and the Integrated Public Alert and Warning System (IPAWS). Information provided for distribution to the public should be timely, accurate and easy to understand. Statements should say exactly how citizens should contact the PSAP, or another agency if the PSAP is not operational. Additionally, the district or PSAP should be ready to cooperate with state and local government to keep the public informed.

8. Local District or PSAP Response Procedures

Each district or PSAP should develop an Incident Action Plan (IAP) for each of the threats identified in their Risk Analysis focused on the threats that are most likely to occur. For example, a district's PSAP that is within a flood zone, and has experienced flood damage in the past, should place this in a 'high risk' category. The appropriate actions should be summarized in an Incident Action Plan and published for staff and be readily available. An example of an Incident Action Plan for a Flood Event follows:

Sample PSAP Incident Action Plan for a Flood Event

1. During periods of heavy rain, or when alerted by the National Weather Service or other agency, monitor the appropriate weather information (TV, computer, warning system, NOAA weather radio or other as needed).
2. Notify ECD Director/manager that relocation may be necessary.
3. If flooding is eminent, prepare to move operations to the backup location.
4. Notify TECB via email or telephone that relocation to the backup center may be necessary due to flooding.
5. Notify local EMA of the same.
6. Send on-call or on-duty personnel to the backup center to begin operations, perform equipment start-up, etc. when it is safe to travel.
7. Notify AT&T Resolution Center that a reroute of 911 traffic to the backup center is needed after operation is confirmed.
8. Evacuate the PSAP safely, performing security measures and power down as required (see evacuation checklist). Note: monitor road and weather conditions – do not become a victim.

Developing and maintaining IAPs for each type of event will minimize confusion and allow staff to calmly, and safely, respond.

9. Training and Exercises

Once the district or PSAP has identified the threats that are most likely to occur and prepared the IAPs for responding to each type of threat, regular training should be scheduled to familiarize staff with those plans and procedures. Annual exercises simulating one, or more, disasters or emergencies should be conducted. If hands-on exercises are not possible, table-top exercises may be used. However, it is recommended that hands-on exercises utilizing the actual facilities and systems be conducted whenever possible. The results of these exercises should be recorded and reported to the TECB.

9.1 Multi-event Scenarios

It is possible, and in some cases likely, that multi-event scenarios can impact PSAP operations. Each district or PSAP must consider the possibility of multiple emergencies occurring at one time. For example, it may be necessary to evacuate the PSAP due to flooding during an on-going weather emergency. Plans should reflect this possibility.

9.2 Exercise and Review

An understanding of the roles and responsibilities of each agency/official potentially involved at the state or local level is necessary to develop a comprehensive plan. Assistance in planning before, and coordination during an incident is available through the TECB. While the severity and consequences of an emergency cannot be accurately predicted, effective contingency

planning may minimize the impact on the ECD/PSAP's mission, personnel, and facilities. Therefore, exercises should be conducted in cooperation with local first responders, EMA, utilities, health care, and other infrastructure and critical services providers. Due to ongoing operations, budgetary concerns, scheduling, and other resources not being available, training and exercises of emergency plans often does not occur on a regular basis. However, review and practice are key to being able to implement procedures when disaster or emergencies occur. Local leadership will determine the best methods of developing and exercising their COOP procedures.

10. Summary

The TECB is dedicated to providing assistance to local Emergency Communications Districts, and their respective PSAPs, along with other related agencies and partners in order to minimize the threat of disasters impacting 911 operations in the state and to "ensure that every citizen can effectively access the life-saving power of 911".

Annex A: COOP Template

This template may be edited as needed by local districts/PSAPs to aid in developing a Continuity of Operations Plan (COOP) for each location.

DISTRICT/PSAP INFORMATION

District Name:		**Director:**
PSAP Name:		**Dir. Office Phone:**
Dir. Email:		**Dir. Mobile:**
PSAP 24-hr Phone:		
PSAP Address		
City:	**State:**	**Zip:**
PSAP Assistant Director/Supervisor:		
Asst Dir Office Ph:		Asst Dir Cell Phone:
Asst Dir Email:	*(reproduce this section for additional key staff)*	

VENDOR INFORMATION

PSAP CPE Information	
PSAP Number of Operating Positions:	
PSAP CPE Mfr and Type:	
PSAP CPE Vendor:	
PSAP CPE Contact Info.:	
PSAP CAD Information	
PSAP CAD Mfr:	
PSAP CAD Vendor:	
PSAP CAD Contact Info.:	
PSAP Map Software	
PSAP Map Software Mfr.	
PSAP Map Software Vendor:	
PSAP Map Software Vendor Contact Info.	
PSAP Radio Information	
PSAP Radio System Type/Freq band:	
PSAP TACN Talk Group #:	
PSAP Radio Vendor:	
PSAP Radio Vendor Contact Info:	
PSAP Recorder Information	
PSAP Recorder Mfr:	
PSAP Recorder Vendor:	

PSAP Recorder Vendor Contact Info:	
PSAP UPS Information	
PSAP UPS Mfr./Model:	
PSAP UPS Vendor:	
PSAP Vendor Contact Info:	
PSAP Generator Information	
PSAP Generator Mfr:	
PSAP Generator Vendor:	
Generator Contact Info:	
Add in Additional Vendor Details	

DISASTER RECOVERY RESOURCES

Backup PSAP:	
Portable/Mobile System:	
Interlocal Agreement with _____ ECD:	

1. Can ___ ECD dispatch on your frequencies?
2. Do you share CAD with ___ ECD?
3. If no to the above questions, how are calls processed?
4. If ___ ECD is not reachable, what is the next option?

(answer the above questions for additional ECDs/PSAPs)

Alternate Routing Plan:

ADDITIONAL INFORMATION

Other Disaster Recovery Resources (Safe rooms, other)	
Risk Analysis: Complete an analysis of each threat to PSAP operations. See Section 4 above.	

Annex B – Incident Action Plan and Continuity Tasks

The COOP Plan is intended to provide guidance to PSAP staff through each phase of the continuity cycle. The IAP document is intended for use during an emergency incident. The IAP contains information regarding the nature of the incident, response strategy for managing the incident, staff assignments, and objectives to achieve during a prescribed operational period. Blank copies of the IAP document should be readily available to staff in digital and print formats. This section presents the IAP and an explanation of its use and preparation.

CONTINUITY OF INCIDENT ACTION PLAN

Incident Type	Prepared By	Date	Time
Incident Location (s)			
Operation Period Date: Time:			
Situation Summary and Priorities:			
Hazards and Safety Measures:			

Incident Objectives		
Objectives	Strategy and Resources Required	Assigned To

Incident Management Team (IMT) Members and Assignments		
Name	Position/IMT Role	Contact Information
		Phone: Email:
		Phone: Email:

		Phone: Email:
		Phone: Email:
		Phone: Email:
External Resources		
Contractor/Vendor Name	Services Provided	Contact
		Phone: Email:
		Phone: Email:
		Phone: Email:
		Phone: Email:
Attachments		
Approved By: Time:		Date:

Continuity IAP Instructions

Purpose

The IAP is a tool to aid the organization in managing response to a disruptive incident. The IAP is used to capture incident type, location or locations impacted by the incident, situation summary, operational period, incident objectives, Incident Management Team members and roles, external resources, and approval.

Preparation

The IAP is typically completed by the individual assigned to lead the organization's response and recovery efforts. The IAP is reviewed and approved by a senior representative such as a Director, Sheriff, Chief, or City Manager. Information entered on the form should be concise and clearly described.

Distribution

The IAP should be distributed to all individuals involved in leading incident response and recovery efforts. The priorities and objectives should be presented during briefings to the IMT. Copies of each IAP must be retained for use in the incident documentation and post-incident review(s).

Incident Priorities

The initial stages of a disruptive incident may be chaotic and confusing. It may be difficult to identify the extent of disruptions and damages due to a lack of situational awareness. The IAP is intended to provide individuals responsible for managing the incident response with coordinating information needed to establish actionable priorities and objectives.

Initial priorities will begin with broad and generic language due to the lack of specific information. Examples of initial priorities may include:

- Establish the Incident Management Team (IMT)
- Account for the health and safety status of all personnel
- Determine the status of partner agencies
- Identify the extent of disruption to normal operations
- Determine the level of damage to facilities
- Restore essential services
- Recall off-duty personnel to support response efforts

Priorities will progress to include more specific actions such as:

- Establish defined operational periods
- Restore electrical service
- Request emergency assistance from contractors and vendors
- Conduct damage assessment of the primary facility

Incident Objectives

Incident objectives provide direction and help focus the IMT's actions throughout the response and recovery phases of the incident. Incident objectives are more immediate than priorities and represent a target to be attained during the operational period. Objectives provide a means to measure progress achieved during an operational period.