

State of Connecticut

**Department of Emergency Services and Public Protection/Division of
Emergency Management and Homeland Security**



EMERGENCY COMMUNICATIONS AND WARNING APPENDIX

To the ESF 2 Communications Annex

Of

The State Response Framework

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CONNECTICUT EMERGENCY COMMUNICATIONS AND WARNING APPENDIX

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State Warning and Alerting Authority

The Connecticut Department of Emergency Service and Public Protection, Division of Emergency Management and Homeland Security (DESPP/DEMHS), is the Connecticut Warning and Alerting Authority.

Responsible Connecticut Emergency Support Functions (CT-ESFs)

CT-ESF #1 Transportation

CT-ESF #2 Communications

CT-ESF #4 Fire

CT-ESF #13 Law Enforcement and Homeland Security

CT-ESF #15 Public Information and External Affairs

Section 1 Introduction

The Connecticut Communications and Warning Appendix to the ESF-7 Annex to the State Response Framework addresses the emergency communications needs of response and recovery agencies and organizations in the State of Connecticut. This Appendix addresses the following emergency communication topics:

- Identifies the tangible communications systems and their redundancies for emergency alert, notification, and warning as well as ongoing emergency communications
- Details the dissemination of emergency alerts and warnings to the public
- Details alert and notification to key officials, decision makers and emergency response partners
- Details ongoing communication among response partners
- Details provision of ongoing communication with the public regarding an emergency.

The Department of Emergency Services and Public Protection’s Message Center (DESPP Message Center) serves as the State Warning Point for the State of Connecticut. This communications center operates 24 hours per day, seven days per week. DESPP/DEMHS maintains a State Emergency Operations Center (SEOC), which is activated by direction of the Governor and assumes responsibility for coordinating and disseminating information before, during, and after emergencies.

1.1 Purpose

This purpose of this Appendix is to detail how emergency information will be relayed to the public and emergency response partners in the State prior to, during and after an emergency. This Appendix details which organizations and personnel are responsible for the technology and systems associated with relaying emergency information, alerts and warning.

This Annex describes the process for staffing, operating, and maintaining a warning system in the State of Connecticut during a threatened or actual emergency, disaster or catastrophe. It outlines the organization, operational concepts, responsibilities, and procedures to disseminate timely and accurate warnings to government officials and the public in the event of threat or emergency throughout the State.

1.2 Scope

The State Emergency Communications and Warning Appendix serves as a part of the ESF-7 Annex to the Connecticut State Response Framework (SRF) and applies to the communications and warning resources utilized by CT-DESPP/DEMHS, state agencies, local jurisdictions, as well as nongovernmental organizations. This inter-jurisdictional and interagency coordination will be conducted through the SEOC, the individual jurisdictions’ and department emergency communications centers (ECCs), command posts, the CT-DESPP/DEMHS communications

vehicles, and other available communications methods. The circumstances of the individual incident will determine the extent to which each of these communications modes will be utilized.

Responsible agencies supporting Connecticut Emergency Support Functions coordinate communication actions within the state incident management and response structure National Incident Management System (NIMS) and the Incident Command System (ICS).

1.3 Objectives

- The CT-DESPP/DEMHS Communications and Warning Appendix addresses the following objectives:
- Provide guidance on the dissemination of timely emergency alert and warnings.
- Provide information regarding emergency communications systems.
- Provide guidance on the coordination of resources to support emergency communications during times of emergency.
- Coordinate the acquisition and deployment of communications equipment, personnel, and resources to establish temporary communications capabilities following an emergency, disaster, or catastrophe in the State of Connecticut.

1.4 Policies

- The Connecticut Communication and Warning Appendix serves as a part of the ESF-7 Annex to the Connecticut State Response Framework (SRF).
- As an incident requires, and at the direction of the CT-DESPP/DEMHS Deputy Commissioner or State Emergency Management Director, this Appendix will be activated to coordinate emergency communication and warning functions within the State.
- The CT-DESPP/DEMHS Deputy Commissioner or State Emergency Management Director will maintain overall direction, control, and coordination of the response and recovery efforts through coordination with all participating local, state, and federal agencies.
- The CT-DESPP/DEMHS Deputy Commissioner or State Emergency Management Director will initiate notification and warning of appropriate personnel.
- CT-DESPP/DEMHS will issue warnings to the public as appropriate using available resources, which may include the Emergency Alert System (EAS), Integrated Public Alert and Warning System (IPAWS), Everbridge Emergency Notification System (ENS), National Oceanic and Atmospheric Administration (NOAA) Weather Radios, and the National Warning System (NAWAS), depending on the type and scale of emergency.
- CT-DEMHS will issue alert and notification messages to response partners as necessary using available resources/systems, which may include the State Everbridge ENS, email, radio, and phone calls (landline, cellular, satellite).
- Public information will be issued through Connecticut 2-1-1, media releases, press conferences, posting to the CT-DESPP/DEMHS website, and social media.

- Emergency information will be shared with response partners through WebEOC, phone calls (landline, cellular, satellite), emails radio communications, and Everbridge ENS.
- As the situation develops, CT-ESF's detailed within this Appendix will work collaboratively to provide coordination and support to local jurisdictions and state agencies based on their Agency's or organization's unique area of expertise, resources, and authorities.
- All CT-ESFs assigned responsibilities within this Appendix will develop and maintain the necessary plans, standard operating procedures, mutual aid agreements, and contracts to accomplish their respective tasks.
- Local communications assets will remain in the control of the respective jurisdiction.
- This Appendix supports, and does not supplant, existing local, state, or federal communication plans and policies.
- Primary emergency communications systems within the State must have at least one redundancy/backup system to support it.

Section 2 Situation and Assumptions

2.1 Situation

The State of Connecticut has identified and prioritized hazards that can affect the State. These hazards have been identified in the Threat Hazard Identification and Risk Analysis (THIRA) and the Hazard Identification Risk Assessment (HIRA) processes, are included and addressed in the Connecticut State Response Framework (SRF).

Should the State be affected by one or more hazards, there may be a need to communicate with the public to provide information and instruction on the actions to take prior to, during and after an emergency. In addition, emergency partners across the State may need to be notified of an actual or potential emergency and instructed on actions to take. Lastly, ongoing information may need to be shared with the public and among emergency response partners prior to, during and after an emergency affects the State. Primary communications systems supporting these needs may be impacted during an emergency, and redundant communications systems may need to be implemented.

2.2 Assumptions

- Adequate communications are available for effective and efficient warning, response, and recovery operations and local governments have emergency management resources, plans, and procedures already in place to support emergency communications and warnings.
- Natural or human-caused hazards, as identified in Connecticut's HIRA and THIRA, may disable or severely reduce the effectiveness of communications currently in place for emergency operations.
- Disasters increase the demand for communications while simultaneously disrupting the public communications networks.
- Landline and cell phone service may be disrupted during all-hazard emergencies, disasters, or catastrophes.
- Communications equipment required for emergency operations will be made available from citizens, businesses, volunteer organizations, and/or other governmental agencies.
- Emergency generators are available to provide 72 hours of backup power in the event of a major power failure. Extended hours of operation are possible with a refueling effort.
- State communications assistance provided to local jurisdictions may consist of personnel, equipment, facilities, materials and supplies, and/or subject matter expertise.
- Amateur radio networks are operated by the local operators affiliated and functioning through the overarching framework of Amateur Radio Emergency Services (ARES) and could be utilized to serve as a backup to existing networks in an emergency.
- Radio and telephone communications may be disrupted by an electromagnetic pulse (EMP) unless appropriate measures are taken.

- Local warnings and announcements (such as door-to-door) will be accomplished per local standard operating procedures (SOPs).
- Mutual aid responders, such as the Connecticut State Police (CSP) and National Guard will assist local public safety officers in evacuation.
- A variety of warning systems may be utilized in the event of an emergency, disaster, or catastrophe, including but not limited to microwave radio networks, news media via the EAS, National Warning System (NAWAS), social media, websites, and the Everbridge ENS.
- Large areas of the State do not have direct access to an audible warning system and may have to depend on commercial radio or television for warning information.
- Timely warnings to the public of threats or emergencies may save lives, decrease injuries, and reduce some types of property damage.
- Electronic news media are often the primary (but not only) sources of emergency information for the public.
- Some people who are directly threatened by a hazard may ignore, not hear, or not understand warnings issued by the government.
- Provision should be made to provide warnings to individuals with access and functional needs (AFN), such as the hearing and visually impaired, and institutions such as nursing homes and other health care facilities.
- Local radio and television stations will broadcast EAS messages when requested by State government officials.
- The CT-DESPP/DEMHS public information officers (PIOs) will play an intricate role in communicating prompt and accurate information in the form of messages to the public. (Refer to CT SRF Section, ESF #15 –Public Information and External Affairs Emergency Support Function Appendix.)
- Social media is quickly becoming a primary and preferred method for receiving disaster and emergency related information for many citizens, and there is rising expectation for emergency response organizations to monitor social media to gather critical information from public sources during disaster or emergencies.
- Communications providers will ensure that communications essential to emergency services are maintained.

Section 3 Concept of Operations

3.1 General

As the primary Connecticut Warning and Alerting Authority, CT-DEMHS supported by Connecticut Emergency Support Function (CT-ESF) #2 and other CT-ESFs as needed, will coordinate the dissemination of emergency alerts, warning and notification, and maintain the supporting communications systems.

The following concepts apply under this Appendix:

- The DEMHS Duty Officer program, maintained by the OTE Unit, consists of four full time DEMHS employees who are paid on-call employees. The Duty Officers rotate through a two week period of being the primary on-call contact person. The Duty Officer receives calls for assistance during afterhours and sends out notifications to the DEMHS Command staff of all requests for state assistance. The Duty Officer also monitors any significant incidents, adverse weather conditions and reports situational awareness and conditions to the Command Staff and Regional Coordinators for distribution to external partners. The Duty Officer may staff the State EOC in a monitoring capacity during events at the request of the DEMHS Command Staff.
- The Communications and Warning Appendix will function under the direction and control of the CT-DESPP/DEMHS Deputy Commissioner, and/or Connecticut State Director of Emergency Management or Multi Agency Coordinator when the SEOC is activated.
- The CT-DESPP Message Center serves as the State Warning Point for the Emergency Alert System (EAS), which allows audio messages to be broadcast on all affiliated radio and TV stations as well as Comcast, Frontier and Cox cable systems.
- The CT-DESPP Message Center is the point of contact for receipt of all warnings and notification of an actual or impending emergency, disaster, or catastrophe. The dispatcher(s) on duty will notify other key personnel, as required by incident type and standard operating procedures (SOPs).
- The CT-DESPP Message Center serves as the 24/7 call center for DESPP, and this includes the following: DEMHS, the Division of State Police, the Connecticut Fire Academy, and the Connecticut Police Academy. In addition, the CT-DESPP Message Center serves as the 24/7 call center for the State Department of Public Health.
- The CT-DESPP Message Center has the capability of radio communications with local emergency operations centers and CT-DESPP/DEMHS regional offices, Connecticut Division of State Police, as well as the Department of Public Health, Department of Correction, Department of Energy and Environmental Protection, and the Connecticut Transit Division of Connecticut Department of Transportation, using the Statewide

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700/800 MHz trunked Radio System. As well as FEMA, DHS and the CT-National Guard, etc.

- The CT-DESPP/DEMHS Public Information Officer (PIO) under CT-ESF #15 coordinates with the Office of the Governor for public information releases.
- CT-DESPP/DEMHS, in coordination with the DESPP IT Unit and the Department of Administrative Services, Bureau of Enterprise Services and Technology (DAS-BEST) maintains the CT-DESPP/DEMHS website (www.ct.gov/demhs), which becomes an important source of emergency information in a disaster.
- If a serious event disrupts communications, the SEOC will be activated. Representatives from responsible CT-ESFs will cooperatively work out a response/recovery plan to reinstate the communications infrastructure.
- CT-ESF personnel and other response partners will be contacted by available communications means regarding an emergency incident. Personnel who are to report to the SEOC will do so upon direction and assignment.
- Warnings and emergency information to the public may happen in a variety of ways, depending on available resources. Officials will disseminate emergency information to citizens through television, radio, Everbridge ENS, Outlook Listserv, EAS (all channel program interruption on local and cable television systems), Wireless Emergency Alerts, social media, reverse telephonic notification systems (a local capability), the CT-DESPP/DEMHS website (www.CT.gov/demhs), and the State's 211 Call Center.
- Amateur radio operators may provide emergency backup radio communications between local EOCs and the SEOC in the event normal communications are disrupted. They may also provide communications with some in-field operators (for example, shelters).
- CT-DESPP/DEMHS maintains communications with FEMA from the SEOC. Primary communications with FEMA is provided by WebEOC, telephone, and radio. CT-DESPP/DEMHS has special radio communications with FEMA, In addition FEMA can be contacted via Satellite phone.

3.2 State Emergency Management Program Communications Networks and Services

CT-DESPP/DEMHS implements a number of communications systems for emergency alert, warning and notification. The following table details these systems, their interface, whether they have associated written procedures for implementation, and when/how often they are tested. Most systems have written procedures associated with them, as indicated in Table 3-1. Systems that do not have procedures are those that either require no specialized skills to operate (such as landline and cell phones), or are the responsibility of another organization to implement.

Each type of notification (internal, external and the public) has several systems supporting it, creating a significant level of redundancy. When deficiencies are noted corrective action is accomplished in accordance with the CT-DESPP/DEMHS Administrative Plan.

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Table 3-1: Communications Systems

Equipment/Systems	Internal	External	Public	Frequency of Tests
DEMHS Regional VHF Radio System	X	X		Quarterly
7/800 MHz State Radio System	X	X		Used daily/Monitoring from DESPP Network Communications Center
EICALL/EITAC System	X	X		As needed/used regularly
Amateur Radio (ACS)	X	X	Wayne Gronlund	At least annually/regularly tested and used by ACS
Cellular Communication	X	X		Tested/ used daily
Landline Communication	X	X		Tested/used daily
Satellite Phone Communications	X	X		Tested annually/updating program
Emergency Telephone System (ETS)	X			Used daily/Monitoring from DESPP Network Communications Center
Mobile Internet Communications Asset	X	X		Tested at least annually/recent DEMHS control
State Tactical On Scene Channel System (STOCS)	X	X		Training includes SOPs/Municipalities use regularly/Tested at least every 2 years
Strategic Technical Reserve	X	X		Tested when received
Mobile Communications Vehicles	X	X		Monthly
Website	X	X	X	Used daily/Links tested as needed
E-mail Distribution / Contact List(s)	X	X		Used daily/tested at least annually and constantly updated
Web EOC (Significant	X	X		Tested at least

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Events)				annually/used regularly and updated
Alpha Paging System	X			Used daily
EAS	X	X	X	Weekly
Social Media	X	X	X	Used daily
NAWAS (State/Federal)	X	X	X	Twice a Day
Everbridge ENS	X	X	X	Tested at least annually/used and evaluated daily by municipalities
Millstone Alerting System	X	X		At least weekly/Millstone keeps records as closely regulated industry
Millstone Public Alert Sirens	X	X	X	Millstone keeps records as closely regulated industry
Wireless Emergency Alert	X	X	X	Federal system
NOAA Weather Radios		X	X	Federal system
Variable Message Boards		X	X	DOT-used daily

3.2.1 State Warning Systems

The following systems support the initiation, receipt and dissemination of emergency alerts and warnings.

National Warning System (NAWAS): NAWAS is a voice communications system operated by the Federal Emergency Management Agency (FEMA) under the U.S. Department of Homeland Security (DHS), and controlled from the FEMA Operations Center (FOC) in Washington, DC, and the FEMA Alternate Operations Center (FAOC) in Olney, Maryland. NAWAS is a 24-hour nationwide, dedicated, multiple line telephone warning system linking federal agencies and the states, and is used to disseminate civil emergency warnings. CT-DESPP/DEMHS serves as the Alerting Authority for this system with the DESPP Message Center acting as State Warning Point for the NAWAS and guards both State and Federal terminals for alert dissemination.

Emergency Alert System (EAS): CT-DESPP/DEMHS as the State Alerting Authority is responsible for Connecticut's use of the Federally mandated Emergency Alerting System (EAS). Activation of the EAS system can take place from either the DESPP Message Center or State EOC. The purpose of the EAS is to provide real-time communication, information, direction, and instruction in the event of an emergency requiring public action and may be activated at the federal, state, or local level. The EAS utilizes commercial radio and television broadcast

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services, which are provided on a voluntary, organized basis. CT-DESPP/DEMHS is certified through the IPWAS program. Use of the EAS System is outlined in the Connecticut EAS Plan.

Everbridge Emergency Notification System (CT Alert): The State of Connecticut through the DESPP Division of Statewide Emergency Telecommunications, funds and provides access to the CT ALERT System powered by Everbridge. This system operated from local Public Safety Answering Points (PSAP's) allows the local jurisdiction to send emergency messages to all wire line telephones in their jurisdictions, in addition the public may register their wireless devices to receive these messages. The CT ALERT System provides a rapid and efficient means to provide emergency information to the public before, during and after an emergency. The SEOC and DESPP Message Center may also send messages to citizens in single or multiple jurisdictions on this system.

NOAA Weather Radios: National Oceanic and Atmospheric Administration (NOAA) will provide information on current weather warnings over weather radio broadcasting stations and other commercial radio stations. The NOAA Weather Radio System is also a hybrid alert system in several ways. It consists of NOAA Weather Radio transmitter on 162.475 MHz. and tone activated receivers owned by individual citizens. The State Warning Point (SWP) can request activation of this warning system, but NOAA also frequently activates these tone alert radios for severe weather alerts.

Wireless Emergency Alerts: The wireless industry, the FCC, and FEMA are developing the Wireless Emergency Alerts (WEA) system, which will deliver messages directly to cell phones based on geographic location at no charge to the user. Currently National Weather Service sends severe weather alerts and CT-DEMHS will be capable of alerting in 2015 by this means.

Variable Message Boards: CT-DESPP/DEMHS coordinates with the Connecticut Department of Transportation and pertinent electronic billboard vendors to display emergency messages on variable message boards and electronic billboards throughout the State.

3.3.2 Emergency Response Partner Alert and Notification Systems

Cellular Communication: CT-DESPP/DEMHS has forty-eight (48) cellular phones/devices thirty –six (36) are for operation use and 24/7 communications with key personnel. Twelve (12) are maintained as a strategic cache.

Landline Communication: CT-DESPP/DEMHS facilities at 25 Sigourney St, State EOC, and Brainard Field use NEC digital phone systems, Regional Offices receive their telephone service from the building in which they are located. DESPP is in the process of shifting all Department locations to the new State VOIP phone system by 2016.

Emergency Telephone System (ETS): CT-DESPP operates an Emergency Telephone System known as the ETS; the ETS is based on the States Microwave backbone system which supports the 700/800 MHz radio System. All DESPP/DEMHS locations, CSP Troops, DEMHS Regional

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Offices, DESPP Message Center, and State EOC all have appearances on the system. The ETS essentially operates as an internal telephone system it does not require use of the Public Switched Telephone Network.

Satellite Phone Communication: CT-DESPP/DEMHS has twenty-Seven (27) satellite phones and terminals for back-up communications use. Of these twelve (12) are maintained as a strategic cache.

CT-DESPP/DEMHS Statewide VHF Radio System: CT-DESPP/DEMHS has a purpose built radio system for point-to-point and limited mobile communications between local municipalities and their Regional Office. Each Region is assigned a specific VHF frequency for these operations. In the event that the Regional Office is unable to communicate, the State EOC has access to all five channels. This system is backed up by the 700/800 MHz Statewide Radio System described below.

State 700/800 MHz Radio System: The State has a statewide 700/800 MHz Trunking radio system that is used for primary agency/department use and for statewide interoperability. An offshoot of this system is the Metropolitan Transportation Authority (MTA) Transit Security statewide talk group accessible and used by each municipality, which has Metro North Rail lines in its jurisdiction, additionally the Connecticut Statewide Police Emergency Radio Network (CSPERN) a statewide common radio channel for Law Enforcement, as well as common channels for State Fire Coordinators, and Urban Search and Rescue (US&R) are available for use.

EICALL/EITAC System: As part of the Statewide 700/800 MHz System, consisting of 130 plus Control Stations installed in the Public Safety Answering Points (PSAPs) and other communications centers statewide. In addition, each municipality is issued one portable radio for its Emergency Management Director, Police Chief, Fire Chief, and EMS Chief for command and control interoperability. In order to enhance our capability for command and control at a specific incident as well as provide backup communications in the event of infrastructure problems, each of the State's thirty-four (34) Mass Decontamination Trailers has a fixed repeater and a 30-foot tower on this system.

Millstone Alerting System: Millstone Station of Dominion Power operates an emergency notifications system to alert the 10 communities in its emergency planning zone as well as State agencies and plant staff to various emergencies and changes to conditions at the plant. This system sends a simultaneous alert via email, voice message and pager message to designated locations and personnel.

Millstone Public Alert Siren System: Millstone Station provides audible sirens to the municipalities within its 10-mile Emergency Planning Zone for alerting the public to an emergency event at the plant. The sirens in each jurisdiction are controlled by that jurisdiction; activation is closely coordinated with CT-DESPP/DEMHS.

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E-mail Distribution/Contact List(s): E-mail distribution lists (DL's) and ListServ Distribution Lists (Listserv DL's) serve as the primary way of initial notification to email for key staff and statewide response groups. These lists are maintained on the DAS-BEST Enterprise Outlook Exchange Server, and the Everbridge ENS servers, for redundancy. In addition, the Everbridge System also can send a voice message to cellular or wireline phones and receive confirmation of sent messages. DEMHS Command Staff, Duty Officer, and Regional Offices have access to these lists, and can activate them from a variety of devices, including Laptop, and IPADs.

Mobile Internet Communications Asset (MICA): The CT-DESPP/DEMHS with the cooperation of DAS-BEST operates this resource, which consists of a broadband satellite uplink, router, 20 laptop computers, 20 VOIP telephones and wireless access points. Its mission is to provide support to incidents in the field or support the operations of the State EOC

WebEOC (Significant Events): The State Emergency Operations Center utilizes WebEOC as its primary means of managing information. In the event of a WebEOC failure, the backup is ICS forms/ EOC messaging forms for incident tracking.

Local Notification Systems: In addition to the State provided CT ALERT System, many municipalities operate local emergency notification ("reverse 911" type) systems that may require registration in order to get local notifications. Depending on the community and the system, these systems may provide alerts to landline phones, cell phones, or email addresses. These systems provide the most localized emergency information in a community and are controlled by local officials. The public is encouraged to sign up for these local notification systems, which can be done by contacting local public safety agencies. The State allows local jurisdictions access to the E911 wireline database to facilitate public alerting from these systems.

Mobile Communications Vehicles (MCV): CT-DESPP/DEMHS operates six Mobile Communications Vehicles (MCV's) designed to provide communications support (Radio, phone, data, and video) at major incidents, planned events, as well as support forward command and control points. Five of these units are forward located in the custody of a local municipality or entity, who operate the MCV on the States behalf, and under the State's Direction. The sixth unit is retained by the State. The MCV's also can provide support and communications redundancy should a CT-DESPP/DEMHS Regional Office need to be relocated in an emergency. The MCV is integral to our alternate EOC Plans.

State Tactical On Scene Channel System (STOCS): It is estimated that there are perhaps 500 separate Public Safety Radio Systems in the 169 towns and cities and two tribal nations, often on different bands making joint tactical operations a challenge. CT-DESPP/DEMHS has procured and deployed to various towns and cities one hundred (100) STOCS Box Systems. The system consists of two rugged cases one containing a four hour battery and charger and three mobile radios, VHF, UHF and 800MHz connected through a Cross Band Repeater Unit using three channels in each band licensed by CT-DESPP/DEMHS. Local responders pre-program these

channels into their portable radios and using the STOCS Box can immediately develop an interoperable network regardless of which band the responder operates on. This system enhances greatly the effectiveness of the various mutual aid plans in place throughout the State.

Strategic Technical Reserve (STR): In order to provide resiliency to the various State and Local Radio systems CT-DESPP/DEMHS maintains a stockpile of radio equipment to be used for immediate restoration of public safety communications systems. The STR includes Base Station Transmitters on each of the six mobile radio bands, 4 for each bands, antennas, cable and mounting kits. The cache also includes two 100-foot tower trailers. With pre-installed VHF, UHF and 800 MHz transmitters.

Communications Interoperability: Systems and equipment used in communications or data systems, purchased with funds administered by CT- DESPP/DEMHS, Homeland Security Grant Program, Emergency Management Performance Grants, Nuclear Safety Funds, etc, are required to be reviewed by the State Interoperable Emergency Communications Executive Committee (SIEC) to insure that they are compliant with Federal and State Interoperability requirements prior to purchase.

3.2.3 Public Information Systems

Website: The front page of the CT-DESPP/DEMHS website (www.CT.gov/DEMHS) is updated to provide information during major emergencies and disasters and also includes a feed of the most recent Twitter posts.

Social Media: CT-DESPP/DEMHS uses social media accounts on Facebook and Twitter to provide information for the purpose of preparing for emergencies and actual emergency messages. This information can be viewed by the public on these platforms even by people who do not have accounts on these sites.

Connecticut United Way 2-1-1: This non-governmental public services organization has been designated as the primary telephone information call center during times of emergency to reduce the number of non-emergency calls made to 9-1-1. Callers can get updated disaster and shelter information, numerous post-disaster programs, and interpreter services. Available 24 hours per day with multilingual services. Information is also available on their website at www.CT211.org.

Variable Message Boards: In addition to a warning tool, variable message boards operated by CT-DOT on the State highways may also be used as a means to relay ongoing emergency information.

CT-DESPP/DEMHS maintains a comprehensive emergency communications capability, which provides multiple redundancies and coverage to the entire State. Table 3-2 reflects current capabilities.

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**Table 3-2
CT-DESPP/DEMHS Emergency Communications Capability**

	Non-Emergency	Emergency	Ground	Mobile
Commercial Telephone	X	x	X	x
Satellite Telephone	X	X	X	X
Cellular Telephone	X	X	X	X
Internet (WebEOC, website)	X	X	X	X
Radio Systems (7/800, UHF, VHF, HF)	X	X	X	X
IT/E-mail Systems	X	X	X	X
State NAWAS	X	X	X	
NOAA Weather Radios	x	X	X	X

3.3 Inter-jurisdictional Communications

The State's emergency response organizations regularly communicate with departments/agencies outside of the State. Some radio systems are used for daily communications; others may be used primarily during emergencies, disasters, or catastrophes when there is an increased need, especially since phone service may be disrupted. Some of this equipment is permanently installed and owned by the State; other radio equipment is installed as required in response to an emergency. Specific mutual aid agreements (MAAs) and/or memoranda of understanding (MOUs) exist between response organizations in the State, to include state agencies and municipalities.

3.4 Redundant Communications

During any major event affecting the State of Connecticut, emergency communications systems are at risk of becoming limited due to systems being damaged, destroyed, overloaded, or otherwise rendered inoperable. Because effective communication is a critical component of emergency management, the use of interoperable, redundant communications systems among all response elements is essential to ensure a prompt and coordinated response and recovery. CT-DESPP/DEMHS has evaluated its communications systems against the hazards and threats identified in the HIRA/THIRA, as well as the requirements of the emergency management program, and has developed appropriate redundancies to address these identified vulnerabilities.

The CT-DESPP/DEMHS radio systems are supported by the Connecticut Telecommunications Service (CTS) a function of DESPP. They provide direct repair and maintenance through the CT-DESPP Network Control Center (NCC) in Middletown (24/7). Staff members may be dispatched to take corrective action or a contractor will be used to undertake the work. The NCC

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has the capability to monitor all functional areas of the radio and microwave network, and detect faults and failures before detection by users.

CT-ESF #2 monitors the status of communications systems, coordinate resources to support the repair of damaged systems, coordinate backup and auxiliary communications assets, and notify response partners of the status of impacted communications.

Some Specific System redundancies include:

- Coordinated failover of State 7/800MHz Trunked Radio System;
- Ability to control Regional VHF Radios from State EOC;
- Ability to use EICALL/EITAC System to back up the High Band VHF System using portable radios assigned to local EMDs;
- Provision of two internet access networks from State EOC and Regional Offices. (State Fiber Network and Commercial Internet);
- Wire line based internet connectivity backed up by portable MiFi Hotspots assigned to DEMHS Staff capable of operating five separate devices;
- Redundant servers one housed at DAS BEST and the other at State EOC able to be failed over manually;
- EAS System controlled from two different locations, control network is fully redundant using Radio and Wire line links simultaneously;
- NAWAS System has redundant locations, Primary Warning Point DESPP Message Center, Alternate Warning Point State EOC;
- Dedicated portable IT and communications equipment which allows us to establish a fully functional EOC at an alternate location;
- Wireline and Wireless systems backed up by Satellite Phones in Regional Offices, State EOC and Senior Staff.

3.5 Emergency Alert and Warning

Emergency alert and warning systems are designed to allow state authorities to warn the public of impending or current threats or emergencies affecting their area. Such public warning systems are essential to communicating critical emergency information to the public during times when other communications systems may not be dependable. Public warnings may be issued during severe weather, flooding, fire, hazardous material release, terrorist threat, water contamination, and any other threats to life, property, and safety. During these or any other type of emergency when the need to relay emergency public information is immediate, CT-ESF #2 and CT-ESF #15 will coordinate the development of public warning messages. CT-DESPP/DEMHS will implement the dissemination of the messages via the public warning systems.

3.5.1 Emergency Alert and Warning for Persons with Access and Functional Needs

Access and functional needs populations will be warned of emergencies by available methods, including the following:

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- Visually impaired: EAS messages on radio, sirens, NOAA Weather Radio, reverse telephonic notification systems (locally based), door-to-door notification (locally based).
- Hearing impaired: Captioned EAS messages on television, door-to-door notification (locally based).
- Non-English speaking: Language messages on radio and/or TV, NOAA Weather Radio, door-to-door, other. See work of Governor’s Emergency Communications Task Force, chaired by DESPP Commissioner.

3.6 Emergency Notification

Emergency notification of response partners is critical during times of emergency to ensure response partners have adequate time to prepare for an emergency, and can assemble to respond to an emergency. The State has several means of notifying emergency response partners.

3.6.1 Notification/Warning of Key Officials and Decision Makers

When an emergency requires the notification/alerting of key state officials and decision makers, CT-DESPP/DEMHS will utilize the following means as appropriate:

- Email
- Everbridge ENS
- Landline telephone
- Cellular Phone
- Satellite Phone
- State 2-way radio systems
- Dispatch a vehicle for in-person notification
- Face-to-face communication

3.6.2 Notification/Warning of Emergency Response Partners

When an emergency requires the notification/alerting of emergency response partners from local, state, federal, non-profit and private sector organizations, CT-DESPP/DEMHS will utilize the following means as appropriate:

- Email
- Everbridge ENS
- Landline telephone
- Cellular Phone
- Satellite Phone
- State 2-way radio systems
- Dispatch a vehicle for in-person notification
- Face-to-face communication

3.6.3 Notification

Upon activation of the SEOC, the Logistics Section Chief will notify all supporting CT-ESF #2 agencies/departments. Notification will be distributed via the most appropriate communications equipment as dictated by the incident and capabilities. The Logistics Section Chief will provide incident information, reporting instructions, and any relevant communications coordination information.

Section 4 Organization and Assignment of Responsibilities

This section describes the roles and responsibilities for implementing the Connecticut Communications and Warning Appendix.

4.1 Phases of Emergency Management

Implementation of the Communications and Warning Appendix should include the following general actions by all agencies and organization with responsibilities under this Appendix. These actions are detailed by the phases of emergency management:

4.1.1 Prevention

- Communicate and share information across agencies and organizations with emergency communications and warning responsibilities;
- Collaborate and coordinate on emergency communications and warning related initiatives;
- Identify opportunities for responsible agencies to collaborate on emergency communications and warning related projects in the State;
- Identify potential emergency communications and warning related issues and collaborate to develop or recommend protocols, procedures, and policies to prevent or mitigate their effects.
- Establish an effective public warning system and appropriate operating procedures. Extend the system to keep up with growth. Adopt new methods of warning that increase the ability to reach citizens of the State not well served by current systems.

4.1.2 Preparedness

- Review the CT-ESF #2 Annex in the SRF and update as needed.
- Identify public and private sector communications facilities, equipment, and personnel located throughout the State, including emergency communications vehicles.
- Continually evaluate the capabilities required to accomplish the CT-ESF #2 mission, identify gaps, and leverage resources to address them.
- Identify and coordinate the acquisition and deployment of communications equipment, personnel, and resources to establish temporary communications capabilities.
- As needed, establish memoranda of understanding (MOUs) with commercial telecommunications companies regarding the prioritization of the restoration of critical services.

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- Develop and/or participate in relevant planning, training, and exercise activities at the local, regional, state, and/or federal level.
- Ensure emergency contact lists, resource lists, departmental/functional plans, procedures, protocols, and SEOC checklists/job aids as developed and maintained as needed.
- Ensure representatives from organizations with responsibilities under this Appendix are fully trained and prepared to respond.
- Provide current emergency contact information to CT-DESPP/DEMHS.
- Test communications systems regularly.
- Prepare pre-scripted warning and public instruction messages for known hazards.
- Coordinate with state warning system partners on procedures for transmitting EAS messages to radio and television stations and cable television providers.
- Conduct public education on warning systems and the actions that should be taken for various types of warnings.
- Ensure adequate capability for officials to receive emergency information and communicate decisions.
- Maintain the State's Strategic Technical Reserve.

4.1.3 Response

- Activate emergency communications systems as needed.
- Conduct communications disaster impact and needs assessments.
- Coordinate resources to support emergency communications needs.
- Obtain information from commercial telecommunications companies regarding the status of restoration activities.
- Maintain or restore contact with the other EOCs (local, state, federal, and emergency management/preparedness organizations) as capabilities allow to coordinate communications assets/needs.
- Make communications channels available to provide appropriate information to the public concerning safety and resources required for disaster recovery.
- Assess the need for and obtain telecommunications industry support as needed.
- Provide technical communications support.
- Prioritize the deployment of services based on available resources and critical needs.
- Conduct media monitoring to determine the need to clarify issues and distribute updated public instructions.
- Discontinue warnings when no longer required.
- Maintain appropriate records of costs incurred during the event.

4.1.4 Recovery

- Arrange for alternate communications systems to replace systems that are inoperative due to damage from emergencies, disasters, or catastrophes.

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- Maintain or restore contact with all appropriate state agency emergency communication centers.
- Gather communications damage assessment information from pertinent public and private communications organizations and report to the SEOC Planning Section for situational awareness.
- Coordinate support of recovery activities, as needed.
- Coordinate resources to support the restoration communications capabilities as needed.
- Participate in an after action review.
- Notify the public when the emergency has been terminated.

4.1.5 Mitigation

- Identify and implement mitigation activities to prevent or lessen the impact of future incidents to communications systems.

4.2 Organization

4.2.1 General

The emergency communications system is organized and coordinated by the CT – DESPP/DEMHS. Components of the system include groups from the public and private sectors.

4.3 Assignment of Responsibilities

4.3.1 CT-DESPP/DEMHS

- Coordinate public information and warning.
- Develop and maintain procedures for emergency communications systems.
- Test emergency communications systems in accordance with the schedule identified in Table 3-1. Monitor results of all warning systems tests and determine any remedial actions necessary. Ensure tests, test results, and corrective actions are appropriately documented.
- Develop emergency public information messages (both pre-scripted and new).
- Activate public warning systems, as needed. When activated, ensure systems have been implemented successfully.
- Implement contingency plans to provide warning if established systems fail to work or reach those at risk.
- Provide alert and notification to pertinent emergency response partners.
- Work with the Public Information Officer (PIO) and CT-ESF #15 – External Affairs to ensure pertinent warning information is provided to the print media for distribution to the public.
- Maintain emergency communications equipment in good order, and address malfunctioning equipment.

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- Oversee planning and development of a reliable communications system for emergency operations.
- Determine status of primary and alternate communications systems. Ensure redundant communications circuits/channels are available for use, if needed.
- Coordinate requests for repairs to emergency communications equipment.
- Maintain appropriate logs.
- Maintain emergency telephone numbers, email lists, radio frequencies, notification methods, etc.
- Coordinate Amateur Radio Services, as needed.
- Coordinate the inclusion of business/industry and amateur radio operators into the communications network.
- Provide technical assistance as applicable for the restoration of communications systems.
- Develop procedures for activating the warning system, including appropriate notification lists. Include consideration of access and functional needs populations.
- Authorize cancellation of warning notice or otherwise ensure emergency responders and the public are aware that the emergency is terminated.
- Ensure the existence of a communications capability between the SEOC, other state emergency operation centers (EOCs), and federal and local EOCs.
- Assess the need for mobile and transportable telecommunications assets. Coordinate the deployment of State transportable communications assets to needed locations.
- If needed, develop an incident communications plan (Incident Command System (ICS) Form 205 or equivalent) that identifies all active systems, ensures enough frequencies are allocated to facilitate operations, and lists specific frequencies allotted for the emergency.
- As appropriate, develop mutual aid agreements dealing with warning and assistance from neighboring States.
- If moving to an alternate communications system, ensure that affected state agencies/departments are notified.
- Maintain radio cache.
- Coordinate frequencies and procedures to permit full operation during emergencies.
- Verify that sufficient power generation capacity exists at the SEOC.
- Recruit and train volunteer communications personnel as support for regular personnel during extended operations.
- Maintain a stockpile of spare parts, supplies, and equipment to properly respond to disasters, and identify sources of supply and repair personnel.
- Update the Communications and Warning Appendix and related procedures as required.

4.3.2 CT-ESF #2

- Develop and maintain an emergency communications program and plan for the State of Connecticut.

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- Develop and maintain primary and alternate communications systems for contact with local jurisdictions, state departments/agencies and federal agencies, and nongovernmental and private sector agencies required for mission support.
- Establish and maintain liaison with all recognized communications groups, as required, within the State, including the following:
 - Government agencies
 - Communications service providers
 - CT-ESF #2 counterparts.
- When local and state resources are exhausted, coordinate resource requests or requests for communications assets through the SEOC Resource Unit.
- Coordinate the acquisition and deployment of State communication resources. If State assets are unavailable, determine the availability of mutual aid transportable communications assets.
- Support the activation and implementation of emergency communications and public warning systems.
- Coordinate the provision of temporary telecommunications equipment and personnel support as needed.
- Maintain records of cost and expenditures and forward them to the Finance Section.
- Provide technical assistance as applicable for the restoration of communications systems.
- Coordinate replacement and restoration of critical damaged or destroyed CT-ESF #2 equipment and facilities in affected areas.
- Coordinate impact assessments and establish priority for restoration of information systems service and infrastructure based on criticality of system to the State's needs and in coordination with the States Cyber Security Team.
- Coordinate the restoration and/or rerouting of existing State government voice, video, and data communications and the provision of new telecommunication systems.
- Coordinate with voice, video, and data communications providers and prioritize requirements when providers are unable to satisfy requirements.
- Obtain information from the field regarding status of communications systems.
- Provide frequent communications status updates to the SEOC Multi Agency Coordinator and other relevant entities (state/federal liaisons, etc.).
- Establish liaison with the SEOC Planning Section Chief to facilitate the sharing of information and data, such as providing situation status to the SEOC Multi Agency Coordinator and state-level decision makers.
- Ensure information regarding threats or emergencies with significant voice, video, and data communications implications are brought to the attention of the SEOC Multi Agency Coordinator.
- Support CT-DESPP/DEMHS response activities and mutual aid jurisdictions.

- Report and document event activities by completing and submitting required forms, reports, documentation, and follow-up notations on immediate response communications.

4.3.3 All Other CT-ESFs

Provide all available and obtainable communications resources for the support of CT-ESF #2 missions. Supporting CT-ESFs will aid CT-ESF #2 by providing the following:

- Notification of availability of communications systems or assets that can be utilized in support of disaster operations.
- Notification of any known communications systems failures.

Section 5 Administration and Logistics

This section describes communications support functions as required by an emergency, disaster, or catastrophe.

5.1 Administration

This section addresses the administrative actions associated with satisfying the goals and objectives of the State of Connecticut Communications and Warning Appendix.

5.1.1 Administrative Requirements

- Prepare and retain records, including logs and all staffing documents.
- Provide proper identification of State Emergency Operations Center (SEOC) Connecticut Emergency Support Function (CT-ESF) #2 – Communications personnel.
- Maintain appropriate records for the SEOC CT-ESF #2 Team (for example, Federal Communications Center (FCC) licenses).
- Implement financial accounting and reimbursement procedures.
- Identify and address training needs.
- As needed, develop communications agreements (including mutual aid) with neighboring jurisdictions, private organizations, and volunteers.
- Maintain telephone/e-mail call-down lists of personnel who must be alerted following an emergency declaration.
- Maintain standard operating procedures for appropriate communications systems.
- Maintain list of existing and future communications equipment and needs.

5.2 Logistics and Resource Requirements

This section addresses the logistical needs and resources required for tasks in the Connecticut Communications and Warning Appendix.

- File supporting equipment documentation, licenses (FCC), equipment instructions, and schematics so that they can be found readily.

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- Establish and maintain the security of the equipment, operators, and the area in which the operators work.
- Protect equipment from the effects of lightning and Electromagnetic Pulse(s) (EMP).
- Ensure normal operation even if commercial power fails.
- Regularly test automatic changeover from commercial electrical power to generators.
- Ensure that no interference is generated to other communications systems by placing multiple transmitters on the air simultaneously.
- Ensure equipment functions during power failures.
- Ensure any Uninterrupted Power Supply (UPS) equipment functions properly.
- Protect against cyber-attacks by updating vulnerable operating systems.
- Install firewall software or hardware equipment on any networks with Internet connections.

5.3 Testing

The testing schedule for emergency communications system is detailed in Table 3-1. The DESPP Message Center is responsible for testing systems¹ for which it has responsibility to maintain, documenting the testing, noting outcomes, and if needed, a corrective action plan. Testing logs are maintained by the DESPP Message Center. Test outcomes may be noted only when there is an issue with the system; otherwise, a noted completion of a test indicates the test has been successful. Actual use of equipment and/or systems for day-to-day or emergency operations may serve in lieu of scheduled testing, and will not be documented.

Section 6 Appendix Development and Maintenance

The primary responsibility for coordinating any revision of the Communications and Warning Appendix belongs to the DESPP/DEMHS Deputy Commissioner and/or the State Director of Emergency Management who are charged with maintaining the Connecticut State Response Framework (SRF), its Annexes, standard operating procedures (SOPs), and other reference documents. The DESPP Message Center is responsible for ensuring related procedures and other necessary documents are maintained.

The Connecticut Communications and Warning Appendix will be reviewed on an annual basis in accordance with the State Response Framework (SRF).

¹ Agencies and organizations that maintain systems that CT-DEMHS Communications may use are responsible for the testing and documentation of testing for those systems.

Section 7 Authorities and References

7.1 Authorities

7.1.1 Federal

- Homeland Security Act of 2002, Establishes U.S. Department of Homeland Security (DHS)
- Robert T. Stafford Disaster Relief Act, Public Law 93-288, as amended

7.1.2 State

- Connecticut State Communications Interoperability Plan 2007
- Connecticut State Response Framework 2014

7.2 References

- Connecticut Interoperability Field Operations Guide
- Comprehensive Preparedness Guide (CPG) – 101, Federal Emergency Management Agency (FEMA), November 2010
- National Emergency Communications Plan, DHS, August 2008
- DHS OEC National Interoperability Field Operations Guide (NIFOG)
- Connecticut EAS Plan, FCC
- FEMA, Principles of Warning, CPG 1-14
- National Warning System Operations Manual, FEMA 2001
- FEMA, Outdoor Warning Systems Guide. CPG 1-17
- CFR, Title 47, Part 11, Emergency Broadcast System