

**EMERGENCY SUPPORT FUNCTION #2—COMMUNICATIONS**

**LEAD AGENCIES**

**Alert and Warning**

Pierce County Department of Emergency Management

**Cybersecurity**

Pierce County Finance Department-Information Technology

**Radio Communications**

Pierce County Department of Emergency Management

**Telecommunications**

Private Communications Service Providers

**SUPPORT AGENCIES**

South Sound 9-1-1

Joint Base Lewis McChord Public Safety Answering Point

Washington State Patrol District #1

Radio Amateur Civil Emergency Services/Amateur Radio Emergency Services

Regional Broadcasters

**STATE LEADS**

Washington Military Department

Washington State Utilities and Transportation Commission

**I. INTRODUCTION**

**A. Purpose**

1. To provide guidance for rapid alerting and warning to key officials and the general public of an impending or occurring natural or technological emergency or major disaster.
2. To provide guidance for the organization, establishment, and maintenance of communications and information system capabilities necessary to meet the operational requirements of Pierce County as a result of an emergency or major disaster.

**B. Scope**

1. This ESF applies to the communications and warning resources within Pierce County, which will be addressed separately, and the emergency use of these resources. It describes the coordination and actions to be taken to establish and maintain telecommunications, information systems, and warning support in preparation for, response to, and recovery from an emergency or major disaster which affects the population and operation of Pierce County.
2. Many of our communication capabilities are built on technology that needs to be secured and encrypted. This ESF addressed the cybersecurity responsibilities and plans surrounding the protections of our communications technologies.

C. Core Capabilities and Actions

The following table lists the core capabilities that ESF #2 most directly supports along with the related ESF #2 actions. In addition to the core capabilities listed in the table, all ESFs support the following core capabilities: Planning, Operational Coordination, and Public Information and Warning.

<b>Mission Area</b>	<b>Core Capability</b>	<b>Description and Actions</b>
Protection	Cybersecurity	<ol style="list-style-type: none"> <li>1. Implement countermeasures, technologies, and policies to protect physical and cyber assets, networks, applications, and systems that could be exploited to do harm.</li> <li>2. Secure, to the extent possible, public and private networks and critical infrastructure (e.g., communication, financial, power grid, water, and transportation systems), based on vulnerability results from risk assessment, mitigation, and incident response capabilities.</li> <li>3. Formalize partnerships with governmental and private sector cyber incident or emergency response teams to accept, triage, and collaboratively respond to incidents in an efficient manner.</li> <li>4. Formalize partnerships between communities and disciplines responsible for cybersecurity and physical systems dependent on cybersecurity.</li> <li>5. Formalize relationships between information communications technology and information system vendors and their customers for ongoing product cyber security, business planning, and transition to response and recovery when necessary.</li> <li>6. Share actionable cyber threat information with the domestic and international government, and private sectors to promote shared situational awareness.</li> <li>7. Implement risk-informed standards to ensure the security, reliability, integrity, and availability of critical information, records, and communications systems and services through collaborative cybersecurity initiatives and efforts.</li> <li>8. Detect and analyze malicious activity and support mitigation activities.</li> <li>9. Collaborate with partners to develop plans and processes to facilitate coordinated incident response activities.</li> <li>10. Leverage law enforcement and intelligence assets to identify, track, investigate, disrupt, and prosecute malicious actors threatening the security of the Nation’s public and private information systems.</li> <li>11. Create resilient cyber systems that allow for the uninterrupted continuation of essential functions.</li> </ol>

**PIERCE COUNTY COMPREHENSIVE EMERGENCY MANAGEMENT PLAN**

<b>Mission Area</b>	<b>Core Capability</b>	<b>Description and Actions</b>
Response	Operational Communication	<ol style="list-style-type: none"> <li>1. Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.</li> <li>2. Ensure the capacity to communicate with both the emergency response community and the affected populations and establish interoperable voice and data communications between federal, tribal, state, and local first responders.</li> <li>3. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life sustaining activities, provide basic human needs, and transition to recovery.</li> <li>4. Re-establish critical information networks, including cybersecurity information sharing networks, in order to inform situational awareness, enable incident response, and support the resiliency of key systems.</li> </ol>

**II. POLICIES**

- A. Chapter 38.52 RCW: Local organizations and joint local organizations authorized—Establishment, operation—Emergency powers, procedures—Communication plans.
- B. Chapter 296-32 WAC: Safety Standards for Telecommunications.
- C. WAC 388-78A-2700: Safety measures and disaster preparedness.
- D. WAC 118-30-060: Emergency plan.

**III. SITUATION**

- A. Emergency/Major Disaster Conditions and Hazards
 

Refer to the Pierce County Hazard Identification and Risk Assessment (published separately).
- B. Planning Assumptions
  - Emergency or major disaster warning may originate from any level of government or other trusted sources. Most forecasting resources are located within the federal government. Protective actions are communicated by local jurisdictions.
  - In the event of an emergency or major disaster, significant outside help and support may not be available for 72 or more hours. Communications equipment, personnel, and procedures must be able to support emergency needs until additional assistance is available.

- Priority in establishing communication systems within Pierce County is life safety first, followed by the protection of property, the environment and the economy, and the re-establishment of critical government functions.
- Pierce County will use normal communications systems as much as possible during an emergency or major disaster. Some needs will be met by reprioritizing day-to-day frequency use to special emergency use.
- Disruption and damage to the telecommunications infrastructure will likely occur in during an emergency or major disaster. The type and degree of damage will determine the effectiveness and efficiency of the response and recovery efforts. Cell towers that carry FirstNet traffic have extended battery backup capability and other features that enhance reliability to meet the needs of the FirstNet public safety community. FirstNet is a wireless, high-speed data service that gives priority to first responders at all times. It is especially useful for first responders during emergencies and other events that result in high cellular usage by the public and cause congestion on local cellular towers.
- Disaster situations could overpower private sector infrastructure.
- Emergency information dissemination will occur as soon as possible by whatever means available.
- Communications will improve as systems are restored.
- A variety of warning systems are required that can address the population's diverse communications needs (such as auditory impairment, visual impairment, and limited English proficiency).

#### **IV. CONCEPT OF OPERATIONS**

##### **A. General**

1. Pierce County Department of Emergency Management (DEM) is the primary point of contact for the communications industry support of the county infrastructure or response to a proclaimed county or regional disaster. DEM will prioritize conflicting requests for assistance from county agencies and first responders and recommend solutions.
2. As the Tacoma-Pierce County Emergency Operations Center (EOC)—hereafter called the “EOC”—is activated and staffed, the control of the county's communications equipment is vested in the Director of Emergency Management—or authorized designee—and is responsible for developing the County's communications plan, as well as establishing and maintaining a Common Operating Picture, if needed. The EOC staff will be responsible for implementing the plan, as needed.
3. The EOC and PSAPs maintain multiple levels of redundant voice and data communications capabilities (including backup power generation), for notification

and warning for public safety coordination, on scene and off scene, and the general public.

4. Common methods for communicating (such as commercial telephone, private line, leased line, regular telephone, cellular telephone, satellite phone, email, and facsimile) will be used on a day-to-day basis and restoration of Pierce County government networks will be restored by Pierce County Information Technology. However, when common methods are disrupted, or when a public safety concern arises, alternate methods will be used.
5. The following are capabilities that facilitate public alert and warning. Public alerting methods are activated at the request of the incident commander, designee, or equivalent:
  - a. The Emergency Alert System (EAS) is the primary mechanism to disseminate life-saving information. EAS messages are also relayed on all NOAA Weather Radio stations and sent county wide.
  - b. Wireless Emergency Alert (WEA) is a mechanism to disseminate life-saving information to cellular phones in a specific geographic area. WEA messages are forced onto phones using a unique tone, such as Amber Alerts.
  - c. PC ALERT is the county's opt-in public mass notification system, which can be used to warn Pierce County residents of actual or potential dangers. The system is an integrated service that is used to alert a specific geographic area and can be considered to be a reverse E9-1-1 system. PC ALERT is compatible with TTY/TDD technologies and can be used to send some messages in alternate language for limited English proficiency but not all are recognized by the technology. It can also be used to send WEA and EAS.
  - d. PC WARN is the county's internal communications system, which can be used to notify county employees, cities and towns, law and fire command, schools, health and medical partners, neighboring jurisdictions, and volunteer groups of an emergency or major disaster, and/or the activation of the EOC.
  - e. The National Warning System (NAWAS) is the primary system used by the federal and state government to disseminate warnings. South Sound 9-1-1 is the primary warning point for Pierce County. The EOC is the secondary warning point.
  - f. All Hazard Alert Broadcast (AHAB)/lahar sirens system. The system is located in the river valleys downriver of Mount Rainier in the lahar zone. The sirens are primarily used to warn of lahar but can be used for all hazard alerting.
  - g. 1580 AM Radio Station is available in the Puyallup River Valley to relay EAS or other emergency messages to the public.
6. Pre-established relationships with community partners and organizations will be leveraged for dissemination of emergency messaging to reach those with limited English proficiency.

7. The following are capabilities that help manage response organizations on scene, emergency coordination centers, establish and maintain a common operating picture, and overcome communications shortfalls with the use of alternative methods.
  - a. The Comprehensive Emergency Management Network (CEMNET) is a two-way low band radio system for backup direction and control for emergency managers located in the EOC radio room.
  - b. The county uses a 700MHz TDMA Phase 2, VHF 410, VHF Overlay Mutual Aid radio network for regular emergency dispatch (South Sound 9-1-1) and all hazards response for first responders. It is a comprehensive radio system with redundant safeguards.
  - c. ARES/RACES amateur radio communications systems located in the EOC can provide backup and supplemental communications to all major hospitals, American Red Cross, fire stations, EOCs located in small cities and towns and other jurisdictions in Pierce County and the State EOC and regional EOCs. ARES is the lead organization in Pierce County for Amateur Radio Emergency Communications. Methods of communications will primarily be by voice and digital data/ Amateur high frequency (HF) communications will allow voice and digital/data links to be established and maintained between regional and national partners and response agencies.
8. Communications with local cities and towns is maintained through radio contact when data, telephone services, and other methods are unavailable. The limiting factor for communications is the capabilities of each jurisdiction. Neighboring jurisdictions will be notified an incident has occurred via the same methods.
9. Communications with Washington Military Department-Emergency Management Division can be maintained through radio when other methods are unavailable.
10. When an emergency or major disaster may require the establishment of mobile communications assets, mobile command posts, or operations centers other than the EOC, the EOC will coordinate delivery of such assets through Mutual Aid Agreement, contracts, or by requests to the State Emergency Operations Center.
11. For a large-scale incident, coordination for the restoration of private communications providers (cable, cell, landlines) in Pierce County is conducted through the State Emergency Operations Center. Information to impacted jurisdictions will be provided by common means available or radio if necessary.
12. Additional coordination with private sector may occur to improve efficiencies and aid in response and recovery by working with county partners for debris removal. Private sector may also provide mobile communications assets for temporary communication networks.
13. Managing cybersecurity incidents are defined in the Homeland Security Region 5 Cybersecurity Resilience CONOPS Plan (Appendix A). Similar to all resource

requests, cybersecurity support can be obtained from the Washington State Military Department.

14. The effectiveness of communication methods and overall plan will be evaluated through the use of After-Action Reports and feedback from the public and first responders.
15. Support agencies must assign a designee as an agency representative/liaison to operate from the EOC—when activated—to coordinate agency activities within the overall disaster response and into disaster recovery.

**B. Mitigation Mission**

1. Pierce County Department of Emergency Management, Pierce County Finance-IT, and South Sound 9-1-1 mitigate the breakdown in communications during an emergency of major disaster by creating redundant, interoperable, and technologically varied methods of alert and warning.

**C. Response Mission**

1. Pierce County Department of Emergency Management currently maintains a variety of communications capabilities available to support emergency response.

**D. Recovery Mission**

1. Pierce County Department of Emergency Management (DEM) coordinates the following disaster recovery activities:
  - a. Following an emergency or major disaster, Pierce County will evaluate the effectiveness of the communication of life safety information through the use of After-Action Reports. Pierce County DEM will do so in cooperation with South Sound 9-1-1 and Pierce County IT.
  - b. DEM will also evaluate the effectiveness of its communications systems and messaging to reach the public, partner organizations, and neighboring jurisdiction.

**V. RESPONSIBILITIES**

Lead Agencies	ESF Responsibilities
Pierce County Department of Emergency Management	<p><b>Alert and Warning and Radio Communications</b></p> <ol style="list-style-type: none"> <li>1. Lead agency for the development and maintenance of county warning procedures using existing capabilities</li> <li>2. Lead agency for the management and/or restoration of radio communications capabilities for Pierce County departments and first responders.</li> </ol>

**PIERCE COUNTY COMPREHENSIVE EMERGENCY MANAGEMENT PLAN**

<b>Lead Agencies</b>	<b>ESF Responsibilities</b>
<p>Pierce County Department of Emergency Management <i>(continued)</i></p>	<ol style="list-style-type: none"> <li>3. Lead agency for the coordination of the restoration of the E9-1-1 service.</li> <li>4. Relay warnings and emergency information to affected municipalities.</li> <li>5. Identify public and private communications facilities, equipment, and personnel located throughout Pierce County and surrounding areas which would support emergency communications needs in case of an emergency or major disaster. These resources include, but are not be limited to, emergency communications vehicles, command posts, government entities, amateur radio personnel, and Explorer Search and Rescue groups.</li> <li>6. Provide emergency radio communications facilities at the EOC or an alternate facility as may be required under the DEM Continuity of Operations (COOP) program and plan.</li> </ol>
<p>Pierce County Finance Department- Information Technology</p>	<p><b>Cybersecurity, County Dept Communications</b></p> <ol style="list-style-type: none"> <li>1. Provide protection and restoration of the county telephone and data network system of communications within their scope.</li> <li>2. County lead for cybersecurity incidents.</li> <li>3. Provide telecommunications equipment and software support for the EOC.</li> <li>4. Support Pierce County ALERT, WebEOC, and GIS technologies and hardware.</li> </ol>
<p>Private Communications Service Providers</p>	<p><b>Telecommunications</b></p> <ol style="list-style-type: none"> <li>1. Harden infrastructure to ensure reasonable level of operations during emergencies and major disasters.</li> <li>2. Collaborate with Pierce County Terrorism Early Warning (TEW) for the purpose of cooperative emergency operations.</li> <li>3. Assess and restore respective communications infrastructure</li> <li>4. Provide situational awareness for response and recovery, to the EOC through coordination with the SEOC.</li> <li>5. Identify restoration priorities and coordinate with Pierce County for additional information and support</li> <li>6. Participate in unified command when applicable.</li> <li>7. Support the Pierce County JIC as possible either directly or through messaging from the SEOC.</li> </ol>

**PIERCE COUNTY COMPREHENSIVE EMERGENCY MANAGEMENT PLAN**

<b>Support Agencies</b>	<b>ESF Responsibilities</b>
Public Safety Answering Points (South Sound 9-1-1, JBLM, Washington State Patrol District #1)	<p><b>Public Safety Communications</b></p> <ol style="list-style-type: none"> <li>1. Provide communications points for public safety calls.</li> </ol>
Radio Amateur Civil Emergency Services (RACES)/Amateur Radio Emergency Services (ARES)	<p><b>Radio Communications</b></p> <ol style="list-style-type: none"> <li>1. Coordinate and provide amateur radio emergency communications in the Pierce County EOC and at designated facilities as resources allow.</li> <li>2. Obtain certification and equipment.</li> <li>3. Maintain equipment.</li> </ol>
Regional Broadcasters	<p><b>Telecommunications</b></p> <ol style="list-style-type: none"> <li>1. Relay EAS messages and accurate emergency information.</li> </ol>

<b>State Leads</b>	<b>ESF Responsibilities</b>
Washington Military Department	<ol style="list-style-type: none"> <li>1. State lead for cyber security incidents.</li> </ol>
Washington State Utilities and Transportation Commission	<ol style="list-style-type: none"> <li>1. State lead for coordinating and gaining situational awareness for large scale incidents that impact private sector communication capabilities.</li> </ol>

**VI. AREAS OF COORDINATION CROSSWALK**

The following table describes the typical functions concurrently active during incidents involving ESF #2. Other ESF annexes are listed as a reference to guide coordination.

<b>Function</b>	<b>Agency</b>	<b>ESF Annex</b>
Debris Clearing	Public Works	ESF #3
Energy	Power Utilities	ESF #12
Resource Requests	DEM	ESF #7
On-Scene Security and Protection	Law Enforcement	ESF #13

**VII. AUTHORITIES AND REFERENCES**

- Emergency Alert System, Pierce County Activation Procedures.
- Pierce County Duty Officer Standard Operating Guides (SOGs).

- Pierce County Emergency Operations Center Plan.
- Pierce County Joint Information Center/Joint Information System Plan.
- Homeland Security Region 5 Cyber Resiliency CONOPS.
- Washington State Radio Amateurs for Civil Emergency Services (RACES).

**VIII. TERMS AND DEFINITONS**

- (See Appendices I and II)

**IX. ATTACHMENTS**

- Homeland Security Region 5 Cyber Resiliency CONOPS.