

# 2

## **Cascadia Subduction Zone Catastrophic Annex**

### **ESF 2 – Communications** (includes Alert and Warning)

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ESF 2 Tasked Agencies	
<b>Primary Agencies</b>	Oregon Emergency Management (OEM) Public Utility Commission (PUC)
<b>Supporting Agencies</b>	Department of Administrative Services (DAS) (State Owned/Leased Facilities and Networks) Oregon Department of Forestry (ODF) Oregon Military Department (OMD) Oregon State Police (OSP) Office of the State Fire Marshal (OSFM) Oregon Department of Transportation (ODOT)
<b>Adjunct Agencies</b>	Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services (ARES/RACES) Civil Air Patrol (CAP)

## 1 Purpose

- Coordinate the establishment and maintenance of an effective communications system for use in disaster operations. The objective is to maintain a reliable communications capability that permits key officials to convey alert and notification instructions, coordinate State support, and to communicate with local government in disaster operations.
- Communication is information transfer and involves the technology associated with the representation, transfer, interpretation, and processing of data among persons, places, and machines. It includes transmission, emission, or reception of signs, signals, writing, images, and sounds or intelligence of any nature by wire, radio, optical, or other electromagnetic systems.
- Describe the methods by which emergency and disaster-related warnings and alerts are communicated to the State of Oregon and to local jurisdictions. This section of ESF 2 describes the dedicated systems available to the State ECC, OERS, Communications Center, jurisdiction EOC and some public safety agencies.

## 2 Scope

- Coordinate planning, implementation, and operation of communications supporting disaster operations. This includes the adoption of established State government-furnished (DAS-Primary) and commercially leased communications systems (OPUC-Primary, if ground-based TSP facilities are utilized) that are used in normal operations as well as in disaster operations. It also includes certain officially recognized, volunteer organizations and non-governmental communications networks.
- Track the overall status of the State’s communications infrastructure during disaster. Infrastructure includes telecommunications, data transmission, internet/intranet, EAS Broadcasting Stations, and public safety agency communications networks.

- Coordinate the provision of temporary communications capability to State agencies and facilities, and local jurisdictions' public safety agencies as required.

### 3 Roles and Responsibilities

#### 3.1 Primary Agencies

##### 3.1.1 Oregon Emergency Management

- Maintain a reliable communications capability that permits communications between local, State and Federal governments to support a disaster operation.
- Monitor status of the State's communication infrastructure during or following any disaster.
- Coordinate and assign resources necessary to respond to an incident that impacts the communications infrastructure.
- When necessary, coordinate provision of a temporary or interim communications capability as required.
- The OEM Communications Officer will conduct periodic maintenance and equipment systems checks on all communications equipment in the ECC.
- The Communications Officer is responsible to coordinate and organize the ARES/RACES capabilities within the ECC.
- Function as an ARES/RACES representative during activations.

##### 3.1.2 Public Utility Commission (OPUC)

###### Priorities

- Facilitate the restoration of energy and telecommunications utility services;
- Serve as liaison between the State and the utility companies to coordinate response priorities and needs;
- Interface with ODOT in securing access into the State with external mutual aid response equipment and personnel to those utilities to ensure compliance with, or waiver of, port of entry regulations.

###### Assets

OPUC- Safety, Reliability and Security Division (SRSD)

- Key contact information for:
  - Three investor owned electric utilities and three natural gas utilities;
  - 33 publicly owned utilities (peoples' utility districts, rural electric cooperatives & municipal owned utilities);
  - All large and most small telecommunication utilities.

### ESF 2. Communications

- Personnel familiar with electric, natural gas, and telecommunications utility facilities and operations.
- Some field personnel with assigned and home-based DAS vehicles.
  - Field staff can respond from home, if needed
  - Personal Protective Equipment supplies for field staff typically carried in vehicle.

#### **Capabilities**

- Established relationships with utility key personnel responsible for emergency response and operations;
- Established relationships with the Federal Department of Transportation – Office of Pipeline Safety under the Pipeline and Hazardous Materials Safety Administration (PHMSA);
  - PHMSA has jurisdiction over the interstate pipeline administration;
  - OPUC has jurisdiction over the intra state pipeline system;
- Capability to work with the utility companies as safety inspectors for pipeline, overhead and underground facility safety;
- Can act as a PHMSA representative for safety inspections, as requested by PHMSA;
- Authority to cite unsafe acts;
- Team is capable of maintaining a 12 hours on – 12 hours off rotation schedule for at least two to three weeks in duration;
- Capability to assist in providing damage assessments of energy and telecommunications infrastructure.

#### **Catastrophic Event Operational Challenges**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as ‘available’ for mission deployment;
- Ability to serve as liaison requires ability to contact key personnel both internal and with the utilities. Currently dependent on land lines, mobile phones, and internet access.
- Personnel with vehicles and desired capabilities may be isolated and unable to respond due to road damage or fuel availability;

### ESF 2. Communications

- No stand-by generators for agency office. Communications and information technology systems will be unavailable in the event of a power outage;
- Staff must carry paper copies of utility and staff key contacts in the event the agency network is unavailable.
- In the Oregon Petroleum Contingency Plan, public utility companies are scheduled as Tier 2 for priority rating.

#### **Support Needed Immediately After a Catastrophic Event**

- Satellite Phones and increased communication capabilities post-quake;
  - Communications is critical between members of the electrical, gas or Telecom divisions. Additionally, OPUC safety personnel and integrity management are dependent upon telecommunications capabilities to perform their duties.
- Knowledgeable personnel who are able and willing to mobilize for recovery efforts;
- Billeting for mobilized personnel;
- Generator capabilities;
- Back-up and usable computer systems;
- Fuel for vehicles and generators;
- Road accessibility and/or aerial insertion of utility crews to impacted areas.

#### **3.1.3 Department of Administrative Services**

##### **See ESF-7 for additional DAS CSZ information.**

DAS is organized into the following Divisions:

##### **Office of the Chief Operating Officer (COO)**

- State Chief Information Officer
- State Chief Human Resource Officer
- State Chief Financial Officer

##### **Enterprise Technology Services Division**

- Data Center
- Geo-technological Information
- E-Government
- Computer – Help Desk

##### **Enterprise Goods & Services Division**

- Risk Management
- State Procurement Office
- Print Plant
- Accounting & Contracting

##### **Enterprise Asset Management Division**

- Facilities
- Fleet Management
- Surplus Management

#### **DAS Business Services**

#### **Priorities:**

#### **Office of the Chief Operating Officer (COO)**

- Establish communications with ECC and other State agencies;
- Provide Public Information Officers with updated information as to the status of State offices and programs that are functional;
- PIO's to establish communications with media outlets;
- Establish communications with Governor's Office;
- Coordinate with other agencies.

#### **Enterprise Technology Services Team**

- Establish communications via hard wire, cell phone, lap top computer;
- Ensure electronic mainframe - network capabilities;
- Establish computing environment.

#### **Enterprise Goods & Services Team**

- Ensure the State Procurement Officer has access to electronic systems or paper files for contract servicers information;
- Ensure electronic mainframe – network capabilities to establish accounting system to track payment for goods and services;
- Set up and provide 24 hr. State Procurement staffing to be available to make State procurement office purchases and payments as needed.

#### **Enterprise Asset Management Team**

- Provide building safety inspections for State buildings;
- Provide mitigation and/or minor repairs if applicable to make buildings usable for State employees and services;
- Provide inventory of usable assets from State motor pool and surplus storage yard.

#### **Assets**

- Small cache of two way radios;
- Six satellite phones currently distributed to SDC managers;

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- Voice Mobile Office kit with a switch, handsets and phone numbers in a box available for emergency use;
- State surplus materials can include: police vehicles, state cars, fire trucks, computers, office furniture, surplus military MREs, and various tools. The amount and types of materials varies from month to month;
- Data center has power generators;
- DAS staff includes drivers with CDLs, plumbers, and electricians;
- Technicians to work on & restore mainframe data accessibility;
- Off site, out of state IT, essential information back up storage supporting Business Continuity Plan.

**Capabilities**

- Manages State efforts to procure or contract for equipment, supplies, services, etc. to meet the needs of the incident;
- DAS maintains a current list of contractors that have been vetted by the State to be able to supply goods and services in a disaster;
- The State Procurement Office (SPO) can have backups of their systems restored relatively quickly. All production servers for ORPIN 2.0 are located at SunGard’s Availability Services – Durham, North Carolina Data Center. Complete tape backups of the system are scheduled every night. The current supplier, SciQuest, has implemented a full disaster recovery environment. The environment is a copy of the primary production environment in Durham. The disaster recovery environment can be activated within 1-4 hours in the case of non-catastrophic failure and 8-24 hours in the event of a catastrophic failure;
- The State Data Center (SDC) Service Continuity Plan lists the following restoration schedule:

Function	RTO (Business Continuity)	RTO (Disaster Recovery)
Service Desk	1 – 24 hrs	24 – 48 hrs
Voice	1 – 24 hrs	24 – 48 hrs
Production Services	1 – 24 hrs	
Network	1 – 48 hrs	48 – 72 hrs
Security	1 – 48 hrs	48 – 72 hrs
Distributed Services Support	1 – 48 hrs	48 – 72 hrs
Mainframe	1 – 48 hrs	48 – 72 hrs
Midrange	TBD	TBD
Storage	1 – 48 hrs	48 – 72 hrs

- DAS maintains/owns three State offices outside of Salem which may be used as alternate sites for continuity of operations in Pendleton, Portland and Eugene;
- Essential DAS services needed post-incident include:
  - Accounting services;

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- Use of information systems;
  - Process of property damage claims, FEMA claims;
  - State Motor Pool;
  - Facilities lease management;
  - Contracting and emergency procurement;
  - GIS mapping;
  - Printing services;
  - Procuring a site suitable to the collection and distribution of donated goods and materials;
  - Surplus distribution of State and Federal surplus property to State agencies;
  - Repair, operation and maintenance of facilities;
  - Personnel for protective services like sand bags or boarding up buildings and clean up. Electrical, plumbing and structural services could be provided by staff or obtained via contract;
  - Re-deployment of State personnel to assist with disaster operations;
  - Provision of restorative services including structural, HVAC and electrical systems within DAS owned facilities during or after an incident.
- 
- DAS maintains network switches throughout various buildings throughout the State to provide mainframe access to other State offices. If damaged as a result of disaster. the switching systems are designed to bypass damaged locations and re-route messaging to other switches throughout the State to ensure business continuity and identify the areas in need of repair;
  - DAS estimates that the state “basic” computer network could be restored from back-up in four to eight hours. Connection of computers for work activity will vary;
  - Depending on the scope of the incident, TDM (Time Division Multiplexing), phones should keep working and are supported by our vendor, CenturyLink. For VoIP phones, service can be provided from two different locations other than the State Data Center. VoIP relies on the network being up.

#### **Catastrophic Event Operational Challenges**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as ‘available’ for mission deployment;
- Many DAS employees live outside of Salem and would be unable to reach their worksite;
- Some DAS owned State facilities are older and not built to current earthquake standards which will compromise their survivability;

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- Damages to State buildings may require moving essential operations to alternate facilities. This will reduce the effectiveness of State operations and make State services more difficult for citizens;
- Potential loss of power and damage to computer systems will provide extreme challenges for all State of Oregon agency operations;
- Limited fuel availability for generators;
- Communications, internet, intranet, and cell phones will be limited by damaged repeater and cell sites;
- DAS offices do not have extra supplies (food, water, cots, and blankets) to sustain employees who will be working this event;

#### **Support Needed Immediately After a Catastrophic Event**

- Water, food, shelter and sanitary systems for essential responding employees;
- Electrical power restoration or additional generator capacity;
- Development of a prioritized list of essential computer applications for restoration;
- Additional IT and network personnel to assist with effort to re-establish connectivity to mainframe and computing capabilities;
- Deployment of mobile IT center(s) to impacted areas to re-establish emergency computer communications for responders;
- Additional trained personnel specializing in accounting, comptroller systems and procurement;
- Additional communications hardware, phones, cell phones, internet accessibility;
- Fuels for generators and fleet vehicles;
- Security for State offices and/or alternate locations, stored generators, fleet vehicles, stored fuels, and surplus equipment.

### **3.2 Support Agencies**

#### **3.2.1 OERS Communications Center**

- The Oregon Emergency Response System (OERS) Communications Center is the "State Warning Point" for Oregon, responsible for coordinating the alert and warning activities of this annex. Oregon State Police Western Regional Dispatch Center is the "Alternate State Warning Point";
- When a major emergency or disaster occurs or is imminent, the OERS Communications Center provides alert and warning messages to local warning points, and notifies appropriate local, State, federal, and volunteer agencies. Agencies then respond to the event according to their rules and plans. If

### ESF 2. Communications

appropriate, the state ECC is activated and staffed by State agencies according to this plan. Following activation, the ECC Communications Officer coordinates alert and warning activities;

- Receives emergency information from outside agencies and relays to State agencies, County Warning Points, local EOC, local jurisdictions, and neighboring states as appropriate;
- The State Warning Point or NWS issues WATCH and WARNING information and instructions to District and County Warning Points in affected area(s), using NAWAS or other available communications systems;
- District Warning Points will relay WATCH and WARNING information and instructions received from the State Warning Point to County Warning Points;
- County Warning Points will release WATCH and WARNING information and instructions in accordance with OERS distribution procedure and in accordance with County Warning Plans;
- NAWAS may be used by Warning Points for:
  - Natural disaster response coordination.
  - Hazardous Materials incident response.
  - Search and Rescue (SAR) coordination.
  - Information on local severe weather.
- The OERS Communications Center Manager conducts periodic maintenance and equipment systems checks on all communications equipment in the Center. Records will be kept in accordance with State archival requirements.

#### **Support Needed Immediately After A Catastrophic Event**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment;
- It is very unlikely that response to this kind of incident can be done with the current amount of equipment and personnel for any extended period;

#### **3.2.2 Oregon State Police Western Regional Dispatch Center**

##### **See ESF-13 for complete OSP CSZ information.**

##### **Priorities:**

- Ensure safety of personnel and facilities;
- Ensure safety of public;
- Support state ESF-2 needs as directed by primary agency;
- Coordinate with primary agency for ESF-2 needs of OSP assets and abilities following incident;

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- Closely linked with ODOT for road repair and implementation of evacuation routes and have interoperable communications capabilities with ODOT;
- If all communications capabilities are lost –Troopers are to report to alternate office sites to check in. If that is not a possibility they are to respond to nearest County EOC to assist.

#### **Assets:**

- Part of the state communications system will be interoperable when new equipment is fully installed;
- OSP operates two Regional Dispatch Centers (RDCs). RDC locations are: Salem (northern) and Medford (southern). OSP maintains a presence in the State ECC when it is activated;
- OSP and ODOT have the only truly Statewide communications network.

#### **Capabilities:**

- Support interoperable communications abilities;
- Serves as the Alternate State Warning Point for Oregon;
- Provides Alert and Warning information to County Warning Points; notifies OERS on-call staff of notifications made as soon as practicable.

#### **Catastrophic Event Operational Challenges:**

- Cannot provide communications capability to other agencies' response.

#### **Support Needed Immediately After A Catastrophic Event**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment;
- It is very unlikely that response to this kind of incident can be done with the current amount of equipment and personnel for any extended period;

#### **3.2.3 Law Enforcement Data System**

- Provide alert and warning information to State, alternate State and county warning points, and to county Public Safety Answering Points (PSAP).

#### **3.2.4 Oregon Department of Forestry**

##### **Priorities**

- Ensure safety of personnel and facilities;
- Assessment of State forestry issues as a result of the incident;
- Coordinate with ESF 2 for needs of forestry assets following incident.

#### Assets

- ODF is administered via three operational areas in the State: Eastern Area, Southern Area and Northwestern Area;
  - Each area has five districts.
  - Each ODF district has a communications center. The centers are not operational at all times. Are mainly activated during fire season.
  - Can be stood up to provide communications capabilities 24/7 for as long as needed.
- ODF operates the Salem Coordination Center, which is responsible to coordinate the distribution of ODF assets Statewide;
- Area Headquarters offices located throughout the State direct response activities of ODF assets;

#### Personnel:

- Approximately 800 full time employees located at offices throughout the State;
- Approximately 800 seasonal employees (summer) located at offices throughout the State;
- Meteorologists on ODF staff;
- Have road engineers who can determine roadway safety and landslide probability;
- Retiree and previously qualified personnel can be used to supplement personnel;
- All incoming personnel assistance from other states is trained to the same national standard.
- Through the Fire Mobilization Plan, ODF is capable of mobilizing a substantial response to emergencies including incident management teams, public information personnel, radio systems, communications trailers, kitchens, shower units, and other support services;
- Three Communication Unit trailers equipped with mobile repeaters;
- Seven Communications Technicians throughout the state to set up and manage the Communication Unit trailers, mobile repeaters and provide tech support;
- All repeater towers are accessible by 4WD vehicles;
- Bank of hand held radios;
- All ODF communications equipment is interoperable;
- Have COOP and BCP that addresses primary facilities and capabilities.

#### Capabilities

- ODF is capable of setting up interoperable communications anywhere;

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- Coordination with the Public Utilities Commission, utility organizations and private landowners to facilitate access and entry for repair or service of damaged infrastructure which may interrupt communications.
- Provide warnings to OERS for fires in grasslands, forests, or in the rural / forest interface.

#### **Catastrophic Event Operational Challenges**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment;
- Lack of normal communication systems will impact the ability to call up personnel resources;
- Personnel resources living / working in the inundation areas will be compromised by the event;
- Unable to contact usual public sector contractors for support if normal communication systems are down;
- Accessible and usable roadway networks;
- Loss of power and lifeline roadway systems will impact communications and limit capabilities post-quake until mobile communications and repeaters can be set up.

#### **Support Needed Immediately After a Catastrophic Event**

- It is very unlikely that response to this kind of incident can be done with the current amount of equipment and personnel;
- Accessibility to fuel resources;
- Additional trained personnel to assist with ODF operations;
- Transportation assistance to reach ODF facilities and/or impacted areas;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

### **3.2.5 Office of the State Fire Marshal**

#### **Priorities**

- Life and safety of responders and affected public;
- Search and rescue;
- Hazardous materials response;
- Incident management;
- Responding to calls for OSFM assistance with communication issues.

#### **Capabilities**

- Direction and maintenance and use of the statewide Fire Net/HAZMAT microwave relay radio system;
- Transportation of communication trailers to areas with need;
- Providing local communications between responders and IMT's;
- Set up mobile communications and command centers with IMT's;
- Provide hazardous materials response;
- Using the "Conflagration Act" (ORS 476.510 to 476-610) the State Fire Marshal has the authority and ability to activate local assets on behalf of the State, from cities not impacted by the event.

#### **Assets**

- Three communications trailers (small 4X6 box trailers). Communication trailers include: programmable base station, mobile repeaters, and generators;
- One truck capable of hauling trailers;
- Cache of 150 interoperable / programmable portable handheld radios;
- Three Incident Management Teams for coordination, which include certified safety officers;
- Three Communications Trailers with base stations, portable repeaters, and a cache of 150 portable handheld radios between them. Radios have OSP frequencies and are programmable and are interoperable. Trailers are equipped with generators for power.

#### **Catastrophic Event Operational Challenges**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment;
- Lack of normal communication systems will impact the ability to call up personnel resources;
- Personnel resources living / working in the inundation areas will be compromised by the event;
- Unable to contact usual public sector contractors for support if normal communication systems are down;
- Accessible and usable roadway networks;
- Loss of power and lifeline roadway systems will impact communications and limit capabilities post-quake until mobile communications and repeaters can be set up.

#### **Support Needed Immediately After a Catastrophic Event**

- Additional trained personnel to assist with operations;
- Equipment and repair abilities to fulfill ESF 2 mission tasks;
- Fuel for generators and vehicles;
- Roadway accessibility;
- Air resources to move equipment and personnel.

#### 3.2.6 Oregon Department of Transportation

##### Priorities:

- Restoration of the Statewide microwave network;
- Restoration of the base to base communications thereby establishing mobile to base communications for the communications centers;
- Provide assistance to counties and local municipalities as support. (Oregon Public Works Emergency Response Cooperative Assistance Agreement).

##### Assets:

- ODOT has five Regional offices throughout the State responsible for multiple district offices;
- 14 District Offices with staff and fleet equipment;
- ODOT Transportation Operations Centers (ODOT dispatch) located in Portland, Salem, Bend, and Central Point;
- Transportation Dispatch Centers have radio shops that work on mobile communications and assisting in dispatch offices;
- Can provide rapid damage assessment with assistance from the Military as well as the Civil Air Patrol to provide aerial reconnaissance and photography;
- All ODOT facilities and communication centers have generator back up power;
- Regional offices and the AOC have hard wire analog phone capabilities as well as digital;
- There are three ODOT AOC sites in Salem area and one AOC site in Bend. In an emergency, any of the regional or district offices can support an AOC. Within AOC locations, mobile capability exists to enable movement to an alternate site at any time it is necessary;
- Can project public messaging information via solar powered message boards and surviving highway information systems;
- All of the regional and district ODOT AOC's have HAM radio capabilities. ODOT has 60 technical licensed HAM operators Statewide. Not many have a general license to operate on 2 meter;
- ODOT has Packet Radio capability;

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- ODOT has total interoperability car to car – agency to agency with programmable radios;
- ODOT is part of the Statewide interoperable radio system;
- VHF, UHF, and HAM capabilities;
- Access to ODOT Intelligent Transportation System communications devices used in emergency response operations, such as the Tripcheck.com traveler information website; 5-1-1 traveler information phone number; Highway Advisory Radio; and Variable Message Signs on State highways.

#### **Capabilities:**

- Work with other agencies as needed to determine the usable portions of the State transportation system, including roads and bridges, railroads, transit systems, and motor carrier facilities;
- Mapping and GIS capabilities;
- Conduct aerial reconnaissance and photographic missions, as requested, provided resources are available;
- Protocols with and without communications capabilities to muster employees as well as seasonal and retiree staff to report for work;
- Assist with restoration of the Statewide microwave network;
- Restoration of ODOT base to base communications thereby establishing mobile to base communications for the communications centers;
- Provide assistance to counties and local municipalities as support. (Oregon Public Works Emergency Response Cooperative Assistance Agreement);
- Coordination with ESF 2;
- Have MOU with Oregon PUC defining responsibilities with regard to electrical energy and fuel energy;
- ODOT procurement section coordinates and assists PUC;
- ODOT can provide debris and road clearing for accessibility to towers and repeaters;
- Assist ESF 2 response agencies to obtain accurate damage assessments of critical communications infrastructure;
- Provide information and coordination on roadway access to communication towers to re-establish serviceability.

#### **Catastrophic Event Operational Challenges:**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment.

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- ODOT is not on the list with DAS to automatically receive fuel in this type of an event. Fuel will be critical to run district office generators and for response as well as operation of dispatch centers. There is 25,000 gallons of diesel fuel at the Bend office;
- Loss of communications would be critical. ODOT is part of the State radio system;
- Coastal inundation zones – district offices and equipment will be impacted in this scenario. Inland resources will be needed to fill these resource gaps on the coast.
- Delayed situation reports and assessments of facilities and capabilities in the impacted areas.
- May need fixed wing or rotor aviation assistance to get access to transmission towers with repeaters and microwaves.

**Support Needed Immediately After a Catastrophic Event:**

- Immediate request for personnel and equipment through EMAC will be first order of business. Response to this kind of incident cannot be done with the current amount of equipment and personnel;
- ODOT will have immediate needs for additional equipment and personnel. The following areas will be of primary concern (coastal district offices/ personnel/ equipment) and cannot be counted on for response in this scenario:

Astoria	Warrenton
Seaside	Yachats
Cape Perpetua	Coos Bay

- Fuel;
- No capability within ODOT of transporting fuel;
- PPE for responding personnel;
- Communications equipment-Analog phones, cell phones, desktop computer connectivity's, portable radios.

**3.2.7 Oregon Military Department**

Assist in the provision, set up, and operation of emergency communications equipment, satellite systems and portable telephone and data systems.

**Priorities**

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish redundant communications capability for OMD and the Office of Emergency Management;
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;

- Recall of personnel;
- Identify fuel and communications capabilities;
- The Oregon National Guard may engage in immediate lifesaving response actions for up to 72 hours at individual unit commander's decision;
- Respond to mission tasking by OEM;
- If contacted by local emergency management or local government authorities, units could respond (this action would likely be concurrent with Joint Operations Center (JOC) mission tasking to that unit).

#### **Assets**

- PACSTAR remote communications systems (two) that can support up to 40 users;
- JISC (Joint Incident Site Communications Capability-located alternately between Astoria and PANG)- has ability to support civilian responder internet;
- 41<sup>st</sup> STB Communications Company located at Camp Withycombe has military to military communications assets;
- HF radio caches throughout armories in State;
- US Army Reserve Units in State now available to support Oregon National Guard.

#### **Capabilities**

- Serve as communication conduit to DoD;
- Provide communications backbone for state- Wi-Fi, local internet service, HF radio support within 17 armories, establish remote communications sites that can support up to 40 users;
- Provide minimal communications support to local communities;
- Liaison Officers to counties and other responding agencies can provide "go-kits" to establish communications;
- Limited licensed power and communications workers in the Guard.

#### **Catastrophic Event Operational Challenges**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment.
  - Estimated that 24 hours after event only 30% of personnel available for duty.
  - Estimated that 72 hours after event 50% of personnel would be available for duty.

- About 50% of armories and facilities can operate for a minimum of 72 hours on generator power;
- Accessibility and storage of fuel;

#### **Support Needed Immediately After A Catastrophic Event**

- Diesel and gasoline fuels, to include transit and storage of fuels;
- Personnel to support ESF-2 operations;
- Additional generators;
- Additional communications equipment and repair;
- Heavy lift rotary aircraft;
- Fixed wing aircraft.

### **3.3 State Adjunct Agencies**

#### **3.3.1 ARES/RACES**

Often utilized before, during and after a disaster where normal communications are not functional. Volunteers use amateur radio communications equipment to provide communications support between counties and emergency management personnel. ARES operators ensure that requests for State assistance are received so that personnel in the state's Emergency Coordination Center can coordinate the requested assistance. RACES is used only when the President places a restriction on radio contact.

Amateur radio capabilities are listed throughout this annex for State agencies and adjunct agencies. County Amateur radio capabilities are listed in the County and Local CSZ Information Annex.

#### **3.3.2 Civil Air Patrol (CAP)**

The Civil Air Patrol is the official civilian auxiliary of the U.S. Air Force. They can provide aerial reconnaissance, airborne interoperable communications relay support for critical communications, transportation of personnel and supplies (such as medical) and NIMS trained staff personnel to assist in an operating command center.

#### **Priorities:**

- CAP requires an Operational Risk Assessment (ORM), completed by CAP personnel, before launching an operational sortie. This is their first priority which takes into account available personnel, status of airports and runways, weather conditions and other aspects that could impact the flight.
  - These assessments are standardized and can be completed quickly (within minutes) with perfect conditions. Post-quake and with the likely loss of power, weather knowledge, and limited air traffic control, these assessments would likely take longer to complete.

#### **Assets:**

- CAP conducts base operations out of primary facilities in Eugene, Medford, Salem, Bend, and the Portland area airports (Troutdale, Washington County, Aurora and Vancouver, WA). These facilities could all serve as the primary CAP command and control;
- Secondary operational fields include Brookings, Klamath Falls, McMinnville, Redmond and Tillamook;
- CAP currently has approximately 250 senior members and a similar number of cadets distributed across the State. Of the 250 senior members, 40 are registered pilots throughout the State;
- Their aircraft include seven Cessna 182 and one Cessna 172 aircraft.

#### **Capabilities:**

- CAP has developed a catalog of all State highways from and including US 97 to the Coast, and which segments the CAP could fly individual sorties. This catalog is divided based on where CAP aircraft are typically based for rapid response;
- Can provide quick assessments of airport and runway status for their own and other responder operations;
- Once operational, CAP aircraft can:
  - Provide aerial reconnaissance of damaged infrastructure (roads, ports, rail).
  - Transportation of personnel, supplies and equipment.
- In order to maximize damage assessment efficiency, CAP aircraft could include ODOT and other agency personnel or engineers who would be able to provide expertise and familiarity with road and infrastructure issues;
- With prior authorization CAP can add additional interoperable frequencies (within its radio's frequency range) to its airborne radio capability.

#### **Catastrophic Event Operational Challenges:**

- By nature of a catastrophic event, essential personnel will be delayed in response due to commitments to personal and family safety and security. Responses will be delayed as personnel check in as 'available' for mission deployment;
- Airport runway damage assessments will need to be made prior to the commitment of ready personnel and equipment causing mission delays;
- Accessibility to fuel resources will need to be identified and supplied to CAP.

#### **Support Needed Immediately After a Catastrophic Event**

- Responses will be delayed, however not impossible. Fuel needs will be critical to sustained operations;
- Fuel;

- Support (personnel and parts) for maintenance of aircraft;
- Runway clearance and repair of damaged airports.

**3.4 Federal Government**

**3.4.1 National Warning System (NAWAS)**

Maintain the NAWAS that provides warning and information nationwide to designated warning points. Warning information transmitted over NAWAS for Oregon is relayed from the State NAWAS warning point to district warning points over the State NAWAS network.

**3.4.3 National Weather Service (NWS)**

Provide watch, warning, and information to Oregon. NWS offices may utilize the National Warning System, teletype, or telephone to issue the following:

- Severe Weather Watch - issued when weather conditions indicate that a significant weather hazard may develop and preparatory safety actions must be taken.
- Severe Weather Warning - issued when weather conditions are such that a significant weather hazard exists, or will develop, and protective actions must be taken.
- Seismic Sea Wave (Tsunami) Watch - issued when an earthquake has occurred of sufficient magnitude and in such a location that a tsunami MAY be generated.
- Seismic Sea Wave (Tsunami) Warning - issued upon positive evidence that a tsunami EXISTS.

Station	Areas of Responsibility
Boise, ID	Baker, Harney and Malheur
Medford	Coos, Curry, Douglas, Jackson, Josephine, Klamath and Lake
Pendleton	Crook, Deschutes, Gilliam, Grant, Jefferson, Morrow, Sherman, Umatilla, Union, Wallowa and Wasco
Portland	Benton, Clatsop, Clackamas, Columbia, Hood River, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Washington, Wheeler, and Yamhill

**3.4.4 Alaska and Pacific Tsunami Warning Centers**

Originate Tsunami Watches and Warnings.

**3.4.5 Bonneville Power Administration**

Provide warnings of dam failures, or major interruptions to electric power generation.

**3.4.6 US Forest Service and US Geological Survey**

Originate Volcanic Activity Watches and Warnings.

- Volcano Watch - Issued when volcanic conditions indicate that an eruption is possible. A Volcano Watch may extend for weeks or months.
- Volcano Warning – Issued when the best available scientific information indicates that a volcanic eruption is probable. A Volcano Warning indicates that the need for initiation of protective action exists.

#### 3.4.7 US Department of Energy

Provide notifications of, and route information for public highway transportation of certain radiological materials.

## 4 ESF-2 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies/ESF to identify the appropriate action and State resources to be used.

Once Communications assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

ESF-2 response agencies will send a liaison or establish communication with the State ECC to coordinate response.

### 4.1 Objective

To provide a means to support communications and coordinate restoration of damaged infrastructure through coordination with appropriate federal, State, and local agencies and organizations to minimize loss of life and property in the event of a catastrophic earthquake and tsunami.

#### 4.1.1 Challenges

- Instant loss of landline/network communications/power will limit EOCs' ability to provide local situational awareness;
- Limited ability to validate information from non-traditional sources;
- Limited availability of key response personnel during the initial stages of the response;
- Number of significantly damaged and blocked roads and limited air transport will increase the time to restore communications;
- Limited availability of crews to conduct assessments and repair of the critical communications facilities;
- Numerous single points of failure in the communications architecture that will cause widespread outages beyond the impacted area;
- Significant damage and debris will limit access to conduct assessments and repair.

**4.1.2 Planning Assumptions**

- Local, State and Federal capabilities and resources will be overwhelmed by the magnitude of the incident;
- Aftershocks will cause a significant amount of additional damage during the response;
- Response resources in the impacted area will have limited capability to function and some impacted areas will be isolated;
- Resources outside of the impacted area will have extended response times due to significant impact to transportation infrastructure;
- Severe winter weather including rain, snow, and fog will hamper response operations;
- Instant loss of landline/network communications/power will limit ability Statewide of providing local situational awareness;
- Communications of surviving infrastructure deteriorates 8-12 hours following the initial event based on the loss of backup power for communications towers;
- Communications to coastal communities will likely be limited to RF and Satellite;
- Trunked radio systems will be degraded or inoperable due to failures with copper, fiber and microwave;
- As automated systems fail, manual systems will be used for communicating alerts and warnings;
- Federal, State and Local agencies will have limited ability to communicate using backup systems for initial reporting;
- Local EOCs’ ability to report is dependent on their ability to use HF/VHF communications;
- Media outlets will be a source of information within hours of the incident;
- Amateur Radio operators will be a key source of information during the initial days of the response.

**4.1.3 ESF-2 Shortfalls and Requirements:**

SHORTFALLS	REQUIREMENTS
Damage assessment capability for the Communications sector. (Landline, Cellular, Cable, Microwave, RF)	<ul style="list-style-type: none"> <li>▪ Aerial Platforms to conduct visual inspections of key communications sites.</li> <li>▪ Tactical Communications among teams to support and coordinate communications assessments and repair.</li> </ul>
Limited access to the impacted area for assessment / repair personnel / teams	<ul style="list-style-type: none"> <li>▪ Aerial Platforms to transport assessment teams to key communications sites.</li> <li>▪ Coordination and communications with and between ESF-1 agencies.</li> </ul>

ESF 2. Communications

	<ul style="list-style-type: none"> <li>▪ Safety of responders and repair crews.</li> <li>▪ Debris clearance.</li> <li>▪ Driver restrictions Waiver.</li> <li>▪ Oversize vehicle Waiver.</li> </ul>
Availability of out-of-area crews to provide repair and restoration personnel.	<ul style="list-style-type: none"> <li>▪ Establish Communications Restoration TF to assess gaps in readiness for a large-scale event.</li> <li>▪ Life support and facilities for out of state repair crews.</li> <li>▪ Expeditious Credential Verification.</li> </ul>
Local availability of repair crews and replacement parts.	<ul style="list-style-type: none"> <li>▪ Ensure that responders and repair crews have a robust and proven contingency communications plan to muster personnel.</li> <li>▪ Ensure that repair crews have access to and have enough critical communication repair parts as they are needed.</li> <li>▪ Establish priorities for restoration efforts.</li> </ul>

4.1.4 Concept of Operations

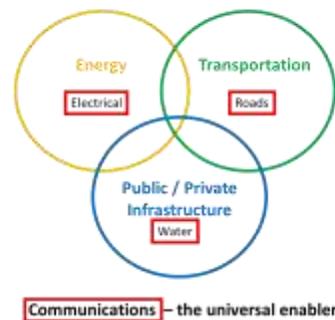
Hazard analysis indicates a catastrophic earthquake will severely disrupt commercial communication services and operational coordination communication to and within the impacted areas.

The use of normal communication systems are likely to be down; alternative communication systems such as HAM radio, satellite radio and satellite telephone will likely be required to provide the initial means of communications from the State ECC to local emergency management offices and other critical facilities.

ESF-2 functions include but are not limited to:

- Conduct communications needs assessments (to include identifying the condition of communications systems), prioritizing the reestablishment of communications in affected areas, and make recommendations to deploy equipment and personnel to affected area(s), as required;
- Identify, coordinate and assist as requested the actions of commercial telecommunications companies to restore services;
- With the severe interruption of services, alternative services to temporarily restore service to critical buildings shall be identified;
- Maintain constant two-way communication with all appropriate emergency-operating services of county and local governments;
- Coordinate frequency management

Critical Infrastructure Prioritization



### ESF 2. Communications

- plan in the disaster area, including talk groups and trunked radio, as required;
- Provide capability for responsible officials to receive emergency information and communicate decisions;
- ECC to establish communications with counties to coordinate communications assets beyond county capability;
- Coordination with ESF -1, ESF-3, ESF-12 on prioritizing areas where transportation, public works, communications and power infrastructure can be repaired in tandem. ESF-2 will coordinate communications response to ensure the management of combined agency efforts;
- ESF-2 will initiate or relay warnings to the public and advise appropriate departments upon activation of the EOC;
- ESF-2 will notify or warn each support agency of the pending situation and in coordination with ICS, establish methods of communication for probable situations including type of emergency, projected time, area to be affected, anticipated severity, forthcoming warnings and actions necessary;
- ESF-2 will coordinate and work to ensure warnings will be available for the public, including people with visual and hearing impairments and/or non-English speaking residents;
- Maintain records of expenditures and document resources utilized during response and recovery efforts.

## 4.2 Alert and Warning

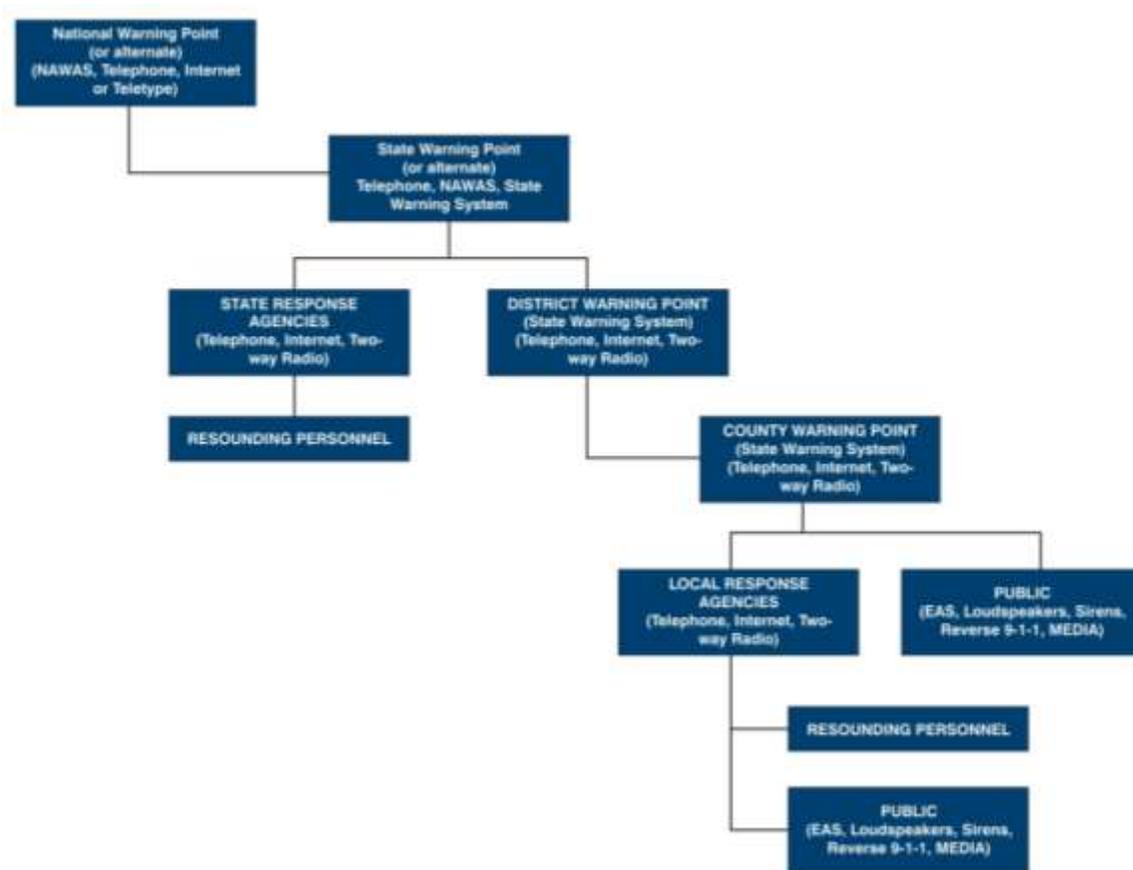
### 4.2.1 Policies

- NAWAS is the primary method of communicating alert and warning messages from national authorities to the State warning point, and from the State warning point to local warning points.
- The telephone may be used to distribute alert and warning information to individual jurisdictions.
- EAS is the primary method of communicating alert and warning messages to the public. Public Safety agencies may be notified of Alert and Warning messages by the Law Enforcement Data System (LEDS).
- Alert and Warning messages are logged electronically and maintained for a minimum of one year.
- Alert and Warning messages are relayed immediately. If a primary system fails, then all appropriate backup systems are utilized.
- The Oregon Emergency Response System (OERS) Communications Center is the "State warning point" for Oregon, responsible for coordinating the alert and warning activities of this annex. Oregon State Police Western Regional Dispatch Center is the "alternate State warning point".

- When a major emergency or disaster occurs or is imminent, the OERS Communications Center provides alert and warning messages to local warning points, and notifies appropriate local, State, federal, and volunteer agencies. Agencies then respond to the event according to their rules and plans. If appropriate, the state ECC is activated and staffed by State agencies according to this plan. Following activation, the ECC Communications Officer coordinates alert and warning activities.
- Local warning points may communicate initial or time-sensitive disaster information to the State primary and alternate warning points by NAWAS. Situation updates are generally communicated by telephone or other means.
- Other State and federal agencies may assist OERS in providing alert and warning to the public under certain circumstances.

4.2.2 Organization

- The alert and warning system provides a means of receiving and disseminating warnings and related information. The system in Oregon includes State, federal, and local "warning points", emergency response agencies, the broadcast media, and the public.



- OERS provides 24-hour alert and notification service from the OERS Communications Center or the backup facility in the OSP Western Regional Dispatch Center.

<b>Table ESF 2-2 Oregon NAWAS Notifications</b>	
<b>County Warning Point</b>	<b>Alerts these other Warning Points</b>
Benton County	Linn County
Clackamas County	
Clatsop County	
Columbia County	
Coos County	
Curry County	
Deschutes County	Crook, Jefferson, and Wheeler Counties
Douglas County	
Grant County	
Hood River County	
Jackson County	Josephine County
Kelly Butte (Portland)	
Klamath 911	Klamath and Lake Counties
Lane County	
Lincoln County	
Marion County	Polk County
Multnomah County	
Ontario 911	Harney, and Malheur Counties
Tillamook County	
Umatilla County	Morrow and Wallowa Counties
Union County	Baker County
Wasco County	Gilliam and Sherman Counties
Washington County	
Yamhill County	

### 4.3 Communications Systems

#### 4.3.1 Policies

The communications capabilities listed in this annex are under the control of OEM and the OERS Communications Center and are an integral element of the State ECC when activated. Because of the continuing evolution in computer and communications technology, this annex will be routinely updated as new information and systems become available.

#### 4.3.2 Concept of Operations

During an emergency or major disaster, decision makers in the State ECC have the capability to communicate with federal, State, and local agencies via the ECC and the Oregon Emergency Response System (OERS) Communications Center.

The OERS Manager is responsible for maintaining and coordinating the OERS State emergency communications and for managing the Communications Center. The OEM Communications Officer is responsible for maintaining and coordinating the ECC communications system with support from the OEM IT section.

All communications systems used by OEM and the OERS Communications Center for normal operations will be utilized during emergency operations. Automation, telephone and two-way radio will be the primary systems used by State agencies to provide coordination of emergency operations. Fax, teletype, satellite phone, Internet, e-mail and amateur radio capabilities also exist.

#### 4.3.3 OEM Communications Center Capabilities

##### Computer/Data Systems

- The OEM Computer Network. Provides access to the State Wide Area Network (WAN) and Internet. Hard wire and wireless capability exists in the ECC.
- OPScenter. Web based system that provides situational awareness and operational information that allows the ECC to communicate, track, and coordinate response and recovery needs Statewide.
- Criminal Justice Information Services, Law Enforcement Data System (LEDS). LEDS provides access to most safety agencies in Oregon and nationally. LEDS may be used in the event of an emergency or to distribute information to 9-1-1 centers, county sheriff's offices, public service answering points, governmental service agencies, and various law enforcement agencies throughout the State. This system allows information to pass to multiple locations within minutes through a teletype terminal.
- Transportation Tracking and Communications (TRANSCOM). This is the U.S. Department of Energy's transportation tracking and communications system for certain radioactive materials. Positional updates on vehicles are obtained through satellite, vehicle and ground station triangulation. The latitude and longitude is calculated and transmitted to authorized users by computer.
- The Health Alert Network (HAN) is a web portal comprised of several sophisticated web applications whose primary purpose is to process, push, and archive health and disease information to the healthcare delivery community and to response partners. This system is typically used to share routine environmental health, epidemiological, and laboratory information to the health and medical community. The HAN has real time 24/7 communications capacity between Federal Government (CDC), the Oregon State Health Department, and every Oregon County Health Department.
- It also gives Federal, State and local agencies the ability to rapidly and securely distribute emergency notifications throughout the State.

#### Telephone Systems

- A 54-line office phone system which has unpublished phone circuits for outbound ECC emergency calls. The system includes four inbound Wide Area Telephone System (WATS) lines and four separate lines available for computer data transmission.
- An independent 40-line Voice Over Internet Protocol (VOIP) telephone system serves the State ECC. All phones on this system have unlisted numbers.
- FAX machines are available at the OEM office and in the Oregon ECC.
- Two "secure" (scrambled) telephones are available. One phone is in the office of the OEM Director, and one in the OERS Manager's Office.
- One Telephone Device for the Deaf (TDD) is available. A TDD is a special device that allows people who are deaf, hard of hearing, or speech-impaired to use the telephone to communicate. A TDD is required at both ends of the conversation in order to communicate. TDD is accessed at (503) 373-7857. The TDD phone is located in OERS.
- A transportable satellite terminal in the OERS Communications Center provides alternate telephone connectivity in case the area telephone system fails. The system can access telephone switches throughout the United States in order to initiate calls. OEM has two handheld satellite phones.
- Select OEM and OERS staff have GETS (Government Emergency Telecommunications Service) cards which prioritize phone traffic for emergency telecommunications.

#### Video Teleconferencing

The Department of Homeland Security provides a Secure/Non-Secure video teleconferencing capability for coordination with DHS/EPR (Emergency Preparedness and Response Directorate (US DHS)). The equipment can be used for both secure and non-secure communications with DHS, other Federal Departments and Agencies, and both internal/external communications with other states as needed. The equipment is located in the Oregon National Guard JOC.

- Video teleconferencing equipment is located in the ECC.

#### Radio

- The OERS Communications Center has direct access to a wide variety of State agency and volunteer radio communications. It is vital to understand OERS does not control any of the networks, but is able to access them as needed.
- The Oregon Department of Forestry (ODF) has an extensive radio system that features six tactical frequencies and a command frequency. All Forestry vehicles have radio communication capabilities that include the "Fire Net / HAZMAT" frequency. The Department of Forestry maintains three fire cache radio networks which may be borrowed for other localized emergencies.

### ESF 2. Communications

- The Oregon Department of Transportation owns and operates a Statewide VHF radio system. All ODOT Districts, Regions, sections and specialty crews, ODOT Director's staff, Public Information and Motor Carrier Transportation Division are accessible through the network. An ODOT Communications Center is co-located with the State ECC and the OERS Communications Center.
- The Oregon Poison Control Center has radio contact with hospitals and ambulances on the "Hospital Emergency Administrative Radio" (HEAR) net.
- Amateur Radio operators assist the OERS Communications Center with communications as necessary. Details of Amateur Radio participation during ECC activations is found in the Oregon State Amateur Radio Emergency Operations Plan under separate cover.
- The Office of the State Fire Marshal (OSFM) is the licensee for the State Fire Net. This single frequency network provides statewide coverage by means of 23 radio repeaters. The OERS Communications Center houses the master console for Fire Net, can transmit from multiple repeaters simultaneously, and receive from any or all repeaters simultaneously. The console is also capable of patching a telephone call into the Fire Net.
- Federal National Alert Radio System (FNARS). This is a FEMA sponsored radio system that provides the ECC with voice and data links to national authorities, other states' emergency management offices and FEMA regional offices.
- Oregon Emergency Services (OES) Communications Network. This single frequency network is accessible by the OERS Communications Center for Northwest Oregon and is available Statewide to emergency management organizations for use while engaged in emergency operations, for routine communications, and for mutual aid between county and State agencies;
- The OERS Communications Center maintains an 800 MHz radio provided by the City of Portland to enable communications between the State ECC and EOC in the Portland Metro area.
- The Civil Air Patrol can provide secondary communications to CAP units Statewide and to CAP aircraft in flight. CAP coordinates the use of assets for deployment and set up of radio communications during a disaster,

#### **Dedicated Telephone Hotlines**

- National Alert Warning System (NAWAS) National Circuit. The federal government maintains NAWAS to provide warning and information nationwide to designated warning points. NAWAS is a dedicated voice "party line" circuit that allows the user to speak to individual warning points or a group of warning points simultaneously. NAWAS distributes emergency alerts regarding possible downed aircraft, forest fires, and other civil disruptions detected by radar or satellite over-flights. NAWAS has an agreement with National Oceanic and Atmospheric Administration (NOAA) to immediately broadcast weather warnings. NAWAS drops are located in National Weather Service (NWS) offices for dissemination and response to NAWAS alerts and messages.

### ESF 2. Communications

- NAWAS Oregon Circuit. The Oregon State Warning System relies primarily on that portion of the NAWAS system that lies within the State. NAWAS terminals exist at designated "Warning Points" to provide State and local governments with the capability to receive warning information and instructions. Utilizing the State NAWAS procedures, emergency and major disaster information can be rapidly relayed to any jurisdiction in the State.

#### **Broadcast**

- Amber Alert: The Amber Alert system is accessed in the OERS Communication Center. It is focused on missing children and utilizes the EAS network but also specifically uses the ODOT reader board network.
- Emergency Alert System (EAS). The EAS is a system that allows public officials quick access to commercial broadcasting facilities to relay warning and alert messages to the public. EAS brings together broadcast networks; cable networks and program suppliers; AM, FM, and TV broadcast stations; Low Power Television (LPTV) stations; cable systems; and other entities and industries to operate in an organized fashion during emergencies at the national, State, or local levels. The ECC is capable of initiating EAS broadcasts to specified areas or Statewide. EAS replaces the Emergency Broadcast System.
- ODOT Electronic Variable Message Sign (VMS) Network. The ODOT VMS is accessed through the ODOT Communications Center.

## 5 Supporting Documents

- National Response Framework, ESF 2 – Communications
- County ESF 2 Annexes

## 6 Appendices

None at this time.