

State of Oregon

Cascadia Subduction Zone Catastrophic Earthquake and Tsunami Operations Plan

Component One of the Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan



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Preface

The purpose of this plan is to provide operational concepts unique to a Cascadia Subduction Zone catastrophic earthquake and resultant tsunami to meet the needs of Oregonians following an event of this horrible magnitude.

This plan serves as a supplement to the State of Oregon Emergency Operations Plan (EOP) and is intended to outline the priorities, capabilities, general response assets, catastrophic event operational challenges and the support needed from outside of the State after the event.

This plan describes the roles and responsibilities of state agencies in addressing emergency response and recovery missions in a coordinated manner with local, tribal, and federal agencies after a catastrophic earthquake and tsunami. All emergency incidents, including one this large begin locally, with initial response being managed by local first responders. Because of the dire impact of this event, this plan contains information gathered from Oregon Counties on their response capabilities and needs. It is the intent of this plan to describe Oregon's needs to deal with this event as a whole, not just State agency needs.

The State of Oregon Cascadia Subduction Zone Earthquake and Tsunami Response Plan is divided into three Components:

- 1. Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan** This component contains the planning scenario and the responsibilities, operational concepts, functional task assignments, and attachments which provide specific planning guidance for earthquake and tsunami response actions.
- 2. Individual ESF Annexes** utilizing the Emergency Support Function (ESF) concept for each of the major response functions/activities. These ESF Annexes describe the hazard-specific concept of operations, actions, and responsibilities that pertain to the function being covered.
- 3. Cascadia Subduction Zone Plan - County Response Information Annex** was developed after a series of meetings with counties, cities and other local responders in order to determine community response capabilities and likely needs post-event.

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Authority and Adoption Letters

Legal Authority

The Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan is developed, revised, published, and distributed in accordance with Oregon Revised Statutes (ORS), Chapter 401.

It is issued by the Director of Oregon Emergency Management under the provisions of ORS 401.092 to “coordinate the activities of all public and private organizations providing emergency services within this state,” and to “provide for and staff a State Emergency Coordination Center to aid the Governor.”

As stated in ORS 401.035, “the Governor is responsible for the emergency services system within the State of Oregon.”

The Director of Oregon Emergency Management utilizes the emergency management system described in this plan in advising the Governor and assisting in coordinating state responses to emergencies or disasters.

The Governor, Director of Oregon Emergency Management and appropriate state agencies have reviewed this plan and support it.

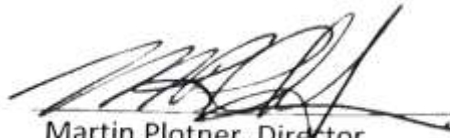
Letter of Adoption

The Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan delineates the policies, procedures, and organization that the Office of Emergency Management (OEM) uses when activating the State Emergency Coordination Center in response to a catastrophic Cascadia Subduction Zone earthquake and resulting tsunami.

This event will require the coordination of all levels of emergency response: local, state, federal, private sector, volunteer and non-governmental service agencies. The scale of this event will push all responders well beyond their day to day efforts and require close collaboration and the ability to adapt to meet the challenges.

This plan was developed under the same spirit of coordination. It takes into account the unique issues and needs of Oregon Counties and how the State and Federal assistance will need to assist our local jurisdictions. The responsibility for first response and managing emergency operations still rests at the local government level. However the scale of this event will require all levels of government and responding agencies to work from the same playbook to effectively assist the people of Oregon in what will be the most challenging time in our State's history.

Periodic changes to this plan will be made as the review process, events, and technology dictate.



Martin Plotner, Director

Oregon Military Department, Office of Emergency Management

Date:

Oct 5, 2012

Plan Administration

Record of Plan Changes

All updates and revisions to the plan will be tracked and recorded in the following table. This process will ensure that the most recent version of the plan is disseminated and implemented by emergency response personnel.

Date	Change No.	Summary of Changes

Plan Distribution List

All agencies will be provided copies or information on where to access this plan.

Agency	Agency
Oregon State Agencies	
Governor's Office	Oregon Dept. of Education
Dept. of Administrative Services	Dept. of Geology and Mineral Industries
Oregon Emergency Management	Dept. of State Lands
Oregon Dept. of Agriculture	Dept. of Human Services
Dept. of Aviation	Dept. of Justice
Office of State Fire Marshal	Oregon Health Authority
Oregon Business Development Department	Dept. of Land Conservation and Development
Dept. of Consumer and Business Services	Parks and Recreation Dept.
Dept. of Corrections	Public Utility Commission
Criminal Justice Information Services (LEDS)	Water Resources Dept.
Dept. of Environmental Quality	Oregon State Library
Oregon Office of Energy	Dept. of Transportation
Office of State Medical Examiner	OHSU – Oregon Poison Center
Dept. of Fish and Wildlife	Emergency Response Program ODOT Office of Maintenance
Dept. of Forestry	Dept. of State Police
Oregon Military Dept.	Oregon Judicial Department
Local Jurisdictions Distribution List	
Baker County Emergency Services	Lane County Emergency Services
Clatsop County Emergency Management	Malheur County Emergency Services
Crook County Emergency Management	Multnomah County Emergency Management
Douglas County Emergency Services	Tillamook County Emergency Management
Harney County Emergency Services	Wallowa County Dept. of Emergency Services
Jefferson County Emergency Services	Wheeler County Emergency Services
Lake County Emergency Services	Clackamas County Emergency Management
Linn County Emergency Services	Coos County Emergency Services
Morrow County Emergency Management	Deschutes County Emergency Services
Sherman County Emergency Services	Grant County Emergency Management
Union County Emergency Management	Jackson County Emergency Management
Washington County Office of Consolidated Emergency Management	Klamath County Emergency Services
Benton County Emergency Management	Lincoln County Emergency Services
Columbia County Emergency Management	Marion County Emergency Management
Curry County Emergency Services	Polk County Emergency Management
Gilliam County Emergency Services	Umatilla County Emergency Management
Hood River Emergency Management	Wasco County Emergency Services
Josephine County Emergency Services	Yamhill County Emergency Services
Tribal Distribution List	
Confederated Tribes of the Umatilla Indian Reservation	Burns Paiute Tribe
Confederated Tribes of the Grand Ronde Community	Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians

Cascadia Subduction Zone Catastrophic Response Plan

Authority and Adoption Letters

Agency	Agency
Confederated Tribes of the Warm Springs Reservation	Coquille Indian Tribe
Confederated Tribes of the Siletz Reservation	Klamath Tribes
Cow Creek Band of the Umpqua Indians	

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Emergency Support Function Annexes

Component 3: Cascadia Subduction Zone Plan
County Response Information Annex

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Overview

1.1 Purpose

This document, designed to serve as a Cascadia Subduction Zone Catastrophic Incident Annex to the State of Oregon Emergency Operations Plan (EOP), describes Oregon's response to a catastrophic Cascadia Subduction Zone earthquake and resultant tsunami. It is written to support the Regional Planning Effort led by FEMA Region X, with the States of Washington, California and Province of British Columbia. This document contains:

- Projected impacts of the earthquake and tsunami
- Objectives, Courses of Action (COAs) and Decision Points
- Response capabilities
- Response actions that can or will be taken
- Expected shortfalls and needs of the State and of local governments immediately following the event.

This plan is segregated into three components:

1. Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan

This component contains the planning scenario and the responsibilities, operational concepts, functional task assignments, and attachments which provide specific planning guidance for earthquake and tsunami response actions.

2. Individual ESF Annexes utilizing the Emergency Support Function (ESF) concept for each of the major response functions/activities. These ESF Annexes describe the hazard-specific concept of operations, actions, and responsibilities that pertain to the function being covered.

3. Cascadia Subduction Zone Plan - County Response Information Annex was developed after a series of meetings with counties, cities and other local responders in order to determine community response capabilities and likely needs post-event.

1.2 Scope and Applicability

1.2.1 Scope

This plan was developed for a scenario describing a catastrophic magnitude 9.0 Cascadia Subduction Zone (CSZ) earthquake including tsunami inundation. It is likely that the resources needed for the response are applicable to any catastrophic event in the State of Oregon. The scope and applicability are described below.

1.2.2 Scope of Operations

The plan describes the scope of work for the response of the State government and supporting entities. State operations and coordination will support the direct response of local, State, regional, tribal, and private-sector entities. This catastrophic response plan, in the CSZ Emergency Support Function Annexes (ESF) describes briefly the specific response efforts of State agencies entities and designates the resources that will be likely deployed by the State of Oregon and by other entities, when appropriate. The CSZ Plan does not address tactics; agency and local jurisdiction specific response information are located in their Emergency Operations Plans.

1.3 Authorities and Guidance

The Plan is consistent with the principles of the National Incident Management System (NIMS) and will be implemented in accordance with the National Response Framework (NRF), the State of Oregon Emergency Operations Plan and corresponding Emergency Support Functions, Annexes, and Appendices. State actions described in the appendix will be implemented in support of local, State, regional, tribal, and private sector entities, which have responsibility for the public safety, health, and welfare within their jurisdictions.

1.3.1 Emergency Support Functions and Core Capabilities

The Plan was written using a combination of the traditional ESF response planning and FEMA Core Capabilities. The State of Oregon and its Counties and Cities use ESF as the basis for their planning.

This plan identifies ESF priorities, assets, capabilities, catastrophic event operational challenges, and support needed immediately following a catastrophic event for all State agencies and adjunct agencies having a role in the EOP.

Core capabilities as described by FEMA are “a reshaping how we prepare for a catastrophic event. This reshaping led to the development of the “Maximum of Maximums” approach, which was to stabilize an all-hazard event within 72

1. Overview

hours. This Strategic Plan expands on this initiative by challenging FEMA to build the Nation's capability to initially recover within 60 days and fully recover within five years".

FEMA has identified twelve core capabilities for stabilizing and restoring basic services and community functionality for essential city service facilities, utilities, transportation routes, schools, neighborhood retail businesses, and offices and other workplaces. This does not presume that every such facility or system would be re-opened, or that they would be operating at 100 percent of pre-disaster levels, but that these critical systems would be back on line and local commerce would be returning.

State of Oregon Core Capabilities – Enabling Response

- Situational Assessment
- Public Messaging
- Command Control and Coordination
- Critical Communication
- Environmental Health and Safety
- Critical Transportation

State of Oregon Core Capabilities – Enabling Survivor Needs

- On-Scene Security and Protection
- Mass Search and Rescue Operations
- Health and Medical Treatment
- Mass Care Services
- Public and Private Services and Resources (Essential Services and Commodities)
- Stabilize and Repair Essential Infrastructure

This Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan component, response, is described using "Core Capabilities". Appendix C, "State of Oregon Core Capabilities for Enabling Response and Delivering Essential Needs" of this plan component describes which ESFs are involved in meeting the Core Capability approach for stabilizing and restoring basic capabilities post-earthquake.

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Situation and Scenario Parameters

2.1 Situation

This plan is based on the threat posed by a magnitude 9.0 Cascadia Subduction Zone earthquake and resultant tsunami. The scenario for this incident was developed using FEMA's HAZUS – MH loss estimation program. Specific analytical information was provided by the National Infrastructure Simulation and Analysis Center Homeland Infrastructure Threat and Risk Analysis Center Office of Infrastructure Protection National Protection and Programs Directorate and contained in the *Draft Analytical Baseline Study for the Cascadia Earthquake and Tsunami* (September 12, 2011, U.S. Department of Homeland Security).

2.2 Oregon Geographic Differences and Challenges

Assumptions regarding county-level response capabilities must vary based on impact of the incidents. Coastal counties will experience a devastating tsunami on top of severe ground shake. While shaking intensity will be less in the I-5 Corridor and Southern Oregon than in the coastal areas, the high inventory of older unreinforced buildings are not expected to react well to extended shaking (up to five minutes) even if intensities are only in the Richter 6.5 range. Therefore assumptions vary for various geographical areas based on the impacts expected in that area.

2.2.1 CSZ Area 1, Oregon Coast



In the **coastal counties of Curry, Coos, Douglas, Lane, Lincoln, Tillamook and Clatsop**, being the closest area to the epicenter of the earthquake, extreme effects are to be expected. Shaking will be very severe and populated areas are subject to a massive tsunami within 15-30 minutes. Structures not built to modern codes are not expected to survive. Much of the coastal residential inventory is likely to

2. Situation and Scenario Parameters

be damaged or destroyed by the following tsunami which may travel more than a mile inland in places. Tsunami waves are expected to begin arriving in about 30 minutes from the earthquake itself, leaving very little time for individuals to seek higher ground. Waves may continue periodically as aftershocks continue well past the initial quake.

Consequently, a relatively high fatality rate will be an additional impact. These counties are reached by a relatively small number of roads which all traverse hilly, landslide prone terrain and cross rivers with bridges that are not expected to survive. Access by road following the earthquake is likely to require a month or more of continuous effort by construction crews and engineers.

Coastal County shortfall expectations are:

- Electrical power will fail.
- Communications methods will largely fail.
- Fuel will be needed for response and for power generation. Propane will also be needed for some generators and heating.
- Normal response centers at police and fire stations will be severely disrupted.
- Travel in many areas will have to be by foot as roads will be broken, displaced, undermined, covered by debris or washed away.
- Isolated survivor communities in the coastal areas will likely be short on all supplies and those individuals exposed to the environment will have to be found and relocated to safe areas due to the severity of winter on the Oregon Coast.
- Large-scale shelter areas will have to be established on short notice. Large-scale evacuation of the surviving population is not logistically possible in the short term. Self-evacuation from the region will not be practical for a month or more.
- Logistical support except from the sea will be very resource intensive.
- Health centers will be non-operational in the traditional sense. Some patients will require relocation and large number of injured will be treated by any reliable means – probably not to current standards of care.
- Pharmaceuticals will be in very short supply.
- Hasty sterilization such as by bleach immersion may be the only means available.
- Health response centers will have to be supported at multiple locations along the coast including, offshore platforms.

2. Situation and Scenario Parameters

- Augmentation of personnel will be required for all elements of response – fire, police/security, emergency management, utility maintenance, shelter staffing, etc.

2.2.2 CSZ Area 2, Metropolitan Oregon Counties

In the **Oregon Metropolitan Counties of Washington, Multnomah and**



Clackamas (and to a lesser extent the cities of Eugene (Lane County) and Salem (Marion County)), effects related to the earthquake include: Power supplies will fail and be unavailable for a month or more except by generator. The general situation for roads will pertain to bridges that will

be unavailable due to collapse or separation from approach abutments. Many will only allow limited traffic. Neighborhoods in urban centers will be initially isolated by road damage and debris. Railroad facilities including bridges will be damaged in multiple locations. Pipeline delivery of fuels will cease due to damage of compressors or pumps until they can be tested. They may run at less than full capacity for months or years. Many masonry structures will sustain significant damage including historical buildings. Areas with older, masonry apartment stock will require significant shelter capacity to be opened nearby. Much housing stock will survive with varying damage but loss of sanitary sewer, the need for gas, electrical and plumbing inspection will prevent prompt re-occupying of existing housing stock. Some hospitals / health facilities will sustain serious damage, though loss of water and power may be more significant factors initially. PDX International and The Port of Portland will be closed for weeks and possibly months. Partial reopening of the airport and port and their access to nearby warehousing and fuel storage will be critical. Older firehouses and police stations as well as logistical support centers for trains, busses, and public safety will sustain damage requiring relocation of those operations.

Oregon Metropolitan Counties shortfall expectations are:

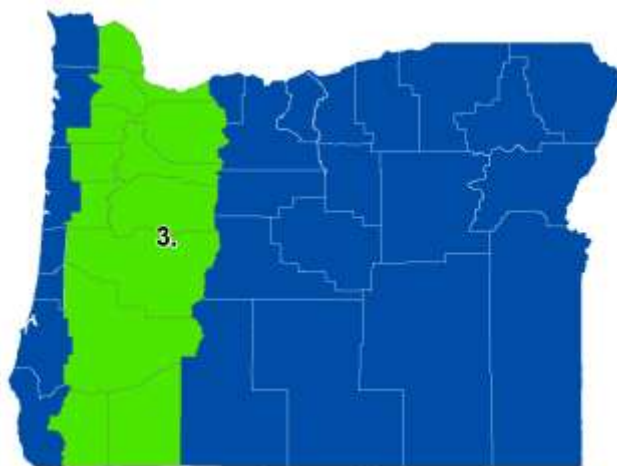
- Priority reconnection to main line for air and marine ports and petroleum terminals as well as hospitals and water utilities.
- Electrical power will fail.

2. Situation and Scenario Parameters

- Communications methods will largely fail. Surviving communication systems will degrade as generators run out of fuel.
- Normal response centers at police and fire stations will be disrupted in some areas.
- Road clearing and debris management may have to be apportioned on an area or regional basis.
- Communities may be isolated and require either re-supply of food and medicines or relocation of some residents.
- Large-scale shelter areas will have to be erected on short notice in larger urban areas.
- Multiple urban search and rescue teams will be required in each of the cities of Portland and its suburbs, Salem and Eugene; and to a lesser degree in smaller cities throughout Western Oregon).
- This area will be a significant center of the health services response and recovery activity to the impacted area overall and will require a variety of support systems to enable leveraging the world-class facilities located here.
- Pharmaceuticals supply will be reduced.
- Augmentation of personnel will be required for all elements of response, fire, police, security, emergency management, utility maintenance, shelter staffing, etc.
- Immediate / initial response in first 96 hours will be from local residents and resources.
- Limited operational state of radio transmission / overloaded with high volumes of emergency responder traffic.
- Fuel and food deliveries will be required within one week. Diesel and gasoline are priority fuel deliveries for generators and responders and propane for some generators and heating. Utility restoration support will be a priority in these areas.
- Support for voluntary self-evacuation by providing transport to relocation assistance.
- Control of vehicle access to surviving freeways and state highways will be required to minimize non-emergency traffic.

2. Situation and Scenario Parameters

2.2.3 CSZ Area 3, Oregon Counties West of the Cascade Range



In Western Oregon Counties including Josephine, Jackson, Douglas, Lane, Linn, Benton, Marion, Polk, Yamhill and Columbia, (including areas of Washington, Multnomah and Clackamas Counties not described in the Oregon Metropolitan Counties shortfall

expectations) significant effects primarily related to shaking and impacts along rivers and roadways are to be expected. Freeways and associated bridges will be damaged, rail lines will be damaged or buried by landslides in multiple places, and communities will be isolated by interrupted roads through direct damage or landslide. Certain dike structures may fail causing localized flooding and possibly some deaths. Industrial plants in the area will experience emergency shutdown of processes which may result in some catastrophic failures and deaths/injuries at those plants. Some bulk storage facilities for petroleum or other hazardous products will rupture due to mechanical strain through shaking, sloshing of contents, or liquefaction of supporting soils. A certain percentage of this loss can be expected to escape secondary containment. Many of these facilities are associated with major cities along rivers and along Interstate 5. If this occurs during fish runs, entire reproductive year-groups may be lost. Severe environmental contamination will result. A mechanical rearrangement of Columbia River sediment may block shipping channels and create unexpected currents. All response activities adjacent to the Columbia River will need to be coordinated with State of Washington Counties across the Columbia and Washington EMD.

Western Oregon County shortfall expectations are:

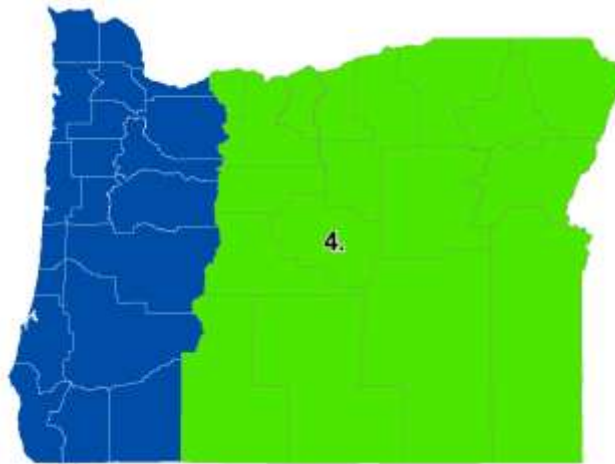
- Electrical power will fail.
- Communications methods will largely fail. Surviving communication systems will degrade as generators run out of fuel.
- Normal response centers at police and fire stations will be disrupted in some areas but less so than on the coast.

2. Situation and Scenario Parameters

- Bridges throughout Western Oregon may be severely damaged, fail or perhaps block vital traffic on the Columbia River.
- Smaller, rural communities may be isolated and require either resupply of food and medicines or relocation of some residents.
- Large-scale shelter areas will have to be erected on short notice in larger urban areas.
- Multiple urban search and rescue teams will be required and possibly teams with specialized experience with industrial plants.
- Logistical support will likely come via Eastern Oregon through to surviving airports in Western Oregon Counties.
- Health centers will be damaged and operate at reduced capacity. Some patients will require relocation and large number of injured will be treated by available means – probably not current standards of care.
- Pharmaceuticals supply will be severely reduced.
- Augmentation of personnel will be required for all elements of response - fire, police, security, emergency management, utility maintenance, shelter staffing, etc.
- Immediate / initial response in the first 96 hours will be from local residents and resources.
- Many warning systems and methods used locally are not interconnected between neighboring jurisdictions i.e., Public System Answering Points (PSAP's / 911).
- Limited operational state of radio transmission / overloaded with high volumes of emergency responder traffic.
- Fuel and food deliveries will be required within one week. Diesel and gasoline are priority fuel deliveries for generators and responders. Propane will also be needed for some generators and heating.
- Generally, all fuel delivery via pipeline will be halted for a period of a month or more.
- Water and sewage treatment will be compromised and be out of service for an indefinite time.

2. Situation and Scenario Parameters

2.2.4 CSZ Area 4, Counties East of the Cascade Range



In all **counties east of the Cascade Mountains**, effects related to the earthquake include: indirect impacts related to transportation corridors (roads, rail, and air), power disruption, supply side chain distribution (including fuel, food, and natural gas), demand for logistics and staging areas, shelter, and relocation of individuals and animals from

the impacted areas. Transportation interruptions and prioritization of emergency supplies to Western Oregon will disrupt raw material imports and finished-agricultural product export. Financially this is an extreme impact and alternate routing to ports of opportunity will be required. This will increase shipping costs, affecting Oregon's agricultural economy. Massive staging areas are likely to be required in various areas of Central and Eastern Oregon with the primary location of relief supplies likely at an established federal ISB at Roberts Field Airport in Redmond, Oregon, Deschutes County. River traffic on the Columbia River will be an important response and recovery lifeline. Mutual aid from Eastern Oregon local jurisdictions will be sought to the maximum degree possible. Many building inspectors, police, firefighters, medical personnel, engineers, and public works personnel may deploy to the impacted areas of Western Oregon.

2. Situation and Scenario Parameters

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Scenario

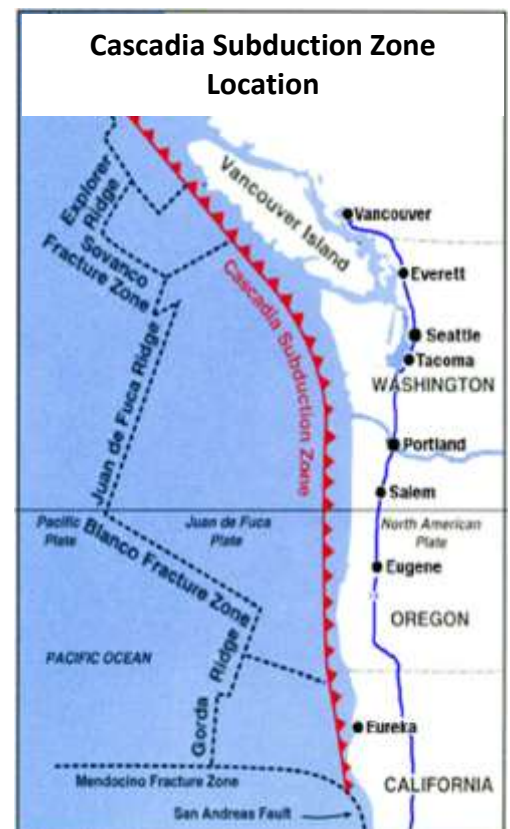
3.1 Parameters

The development of an earthquake scenario hinges on a number of parameters. A key parameter for analysis is the strength of the earthquake, often measured in terms of a magnitude. Magnitude in turn depends on the fault area that slips, how much slippage occurs during the earthquake, and the fault's proximity to the Earth's surface. Other important parameters include the specific date (so that seasonal population changes can be considered in the analysis), time of day of the event, the expected number and severity of aftershocks, and, temporal evolution of the associated tsunamis. The description of the scenario constructed for this analysis can be found below (HITRAC, September 12, 2011, p.5).

3.2 Earthquake Scenario in the Cascadia Subduction Zone (CSZ)

Both direct and indirect impacts of an earthquake impacting the Pacific Northwest were examined by the analytical baseline study produced by RDMB-NISAC. The scenario is not intended to generate the greatest impacts across the entire region, but rather to demonstrate earthquake modeling capabilities that produce both direct and indirect results that can be used for planning and exercises. The direct impacts are damage caused by the earthquake and tsunami. The indirect impacts are cascading impacts to infrastructure systems and the local population.

Stretching from Brooks Peninsula on Vancouver Island to Cape Mendocino in Northern California, the Cascadia Subduction Zone is where the Juan De Fuca Plate meets the North American Plate along an 800-mile (1,300 kilometers) long line off the Pacific coast. The Juan de Fuca Plate is the seafloor and is made up of heavier rocks than the continental mass of the North American



3. Scenario

Plate. These two pieces of the Earth's crust constantly push against each other, and the seafloor subducts, or sinks, below North America.

The scenario for this plan is a 9.0 – magnitude earthquake along the length of the fault, as specified by the Cascadia Region Earthquake Workgroup (CREW). The Juan de Fuca plate begins its decent beneath the North American plate. The buried interface between these two plates, which extends from off shore to the coastline or farther inland in some places, comprises the fault zone, which is capable of breaking in one great earthquake or possibly in sections as smaller earthquakes (HITRAC, September 12, 2011, p.5).

The 9.0 magnitude earthquake scenario examined for this study has an epicenter approximately 95 miles west of Eugene, Oregon. Intense shaking for up to five minutes is assumed. The earthquake generates a tsunami that impacts most of the Pacific Ocean, in particular the Oregon Coast within 15 to 30 minutes of the earthquake.

The direct damage caused by the earthquake was estimated using the FEMA Multi-hazard Loss Estimation Methodology (HAZUS) tool. The HAZUS calculation factored in ground shaking, liquefaction, and potential landslide to estimate damage to buildings, roadways, and physical infrastructure (HITRAC, September 12, 2011, p.6).

3.2.1 Earthquake and Liquefaction Metrics Terminology

The maps used for this study [and which form the basis of the scenario of this plan] geospatially depict the intensity or degree of ground shaking and liquefaction. The following definitions for ground shaking and liquefaction quantities are intended to enable understanding of the modeled damage extent to various infrastructure and building types (HITRAC, September 12, 2011, pgs. 8-14):

- Peak Ground Acceleration (PGA): The maximum acceleration that any point on the ground would experience. The units are in G-force (gravity). PGA can be thought of as the force that something on the ground experiences. For example, if a rock that weighs 100 pounds receives a 50-lb. shaking force, it is said to have a PGA of 0.5, or half of G-force (half of its weight).
- Peak Ground Velocity (PGV): The maximum speed that a point on the ground will achieve due to ground shaking in an earthquake. Units are in centimeters per second.
- Spectral Acceleration (SA): The maximum acceleration that a point on the ground would experience at a particular frequency. In the audio world, this would be the equivalent to how much of the bass, mid-range, or treble are in a particular sound. This is of interest in relation to

3. Scenario

harmonic resonance with structures. Larger and taller structures in particular are more susceptible to danger from lower frequency motion.

- **Lateral Spread:** The relative distance that a point on the ground may move (measured in inches) due to spreading and ground settlement. Lateral spread is a measure of liquefaction and can represent the degree of foundation instability for structures.

3.3 The Earthquake and Resulting Tsunami

The key starting point of the scenario is a ShakeMap generated by the U.S. Geological Survey (USGS) specifically for a 9.0 magnitude Cascadia event. This is an authoritative model of the ground shaking expected for a geologically plausible 9.0 magnitude earthquake.

A tsunami source term (wave height, direction, and velocity) was developed from the Pacifex 11 Exercise model runs combined with NISAC modeling of this project. This source term was used in inundation modeling to obtain the direct impacts of the scenario tsunami. Although the outputs of the ShakeMap were not used directly as input to the Pacifex results, both were constructed to be consistent with the 2005 Cascadia Region Earthquake workgroup (CREW) scenario.

3.3.1 Geographic Scope-Tsunami Susceptibility

The entire Oregon coast is at risk of tsunami inundation in this scenario. Tsunami fatalities in Oregon in the HITRAC study were estimated at 674 persons. It should be noted that coastal population numbers fluctuate wildly due to tourism and time of year. This number is only from a specific snapshot in time (6 February at 0900 local time).

Offshore tsunami models show that a considerable tsunami wave would result and produce significant impact inundation risk to the coastal areas. Although there are no large cities immediately on the Oregon coast, there are several medium-sized to small communities that would see inundation and significant localized damage.

Due to the proximity of the quake, coastal communities may have as little as 15 minutes warning before the tsunami strikes. This will result in significant loss of life for those who are not able to evacuate to nearby higher ground. Some areas lack nearby high ground for shelter from a tsunami, while other areas of the Oregon Coast do not have shelter areas for survivors to be out of the elements.

Infrastructure assets in the tsunami inundation area may be subject to damage based on either construction type or flooding. The force of the incoming wave may in some cases be strong enough to destroy concrete structures. Because

3. Scenario

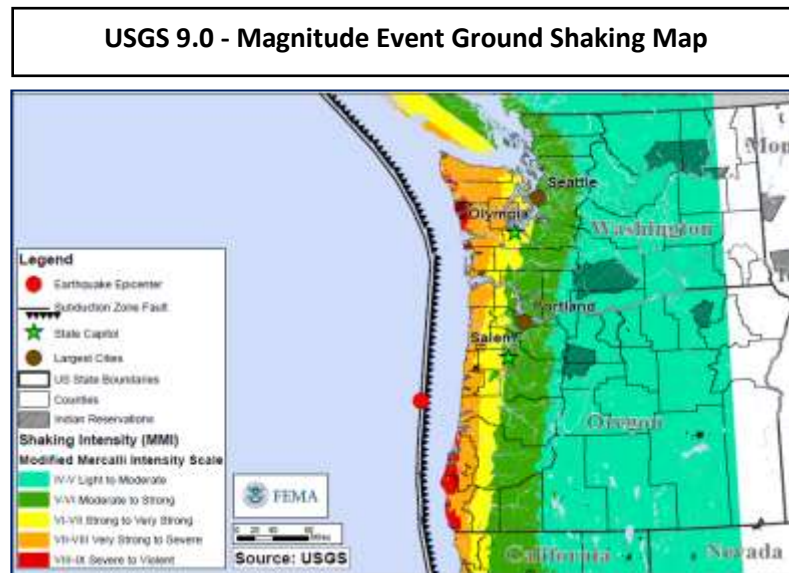
there is not a heavy concentration of people or infrastructure along the coast and because of the relatively steep rise in terrain immediately inland of much of the coastal region, little infrastructure damage would occur that would have a national or regional impact.

3.3.1 Geographic Scope-Shaking Susceptibility

Damage to man-made structures will result both from the energy of shaking as well as possible amplified shaking and ground displacement due to liquefaction.

Different building structures and construction materials have a substantial effect on a structure's resistance to being damaged. Shaking, liquefaction, and building structure types combine to create what can appear to be a non-uniform distribution of resulting damage states. Some higher liquefaction susceptibilities, particularly in the Willamette Valley, tend to increase the potential for structural damages.

- Structural and non-structural damage to buildings and infrastructure, including widespread collapse of buildings.
- Widespread ignition of fires
- Subsidence and loss of soil-bearing capacity, particularly in areas of liquefaction
- Displacement along faults
- Widespread occurrence of landslides
- Hazardous materials spills and incidents
- Dam/levee damage and or failure resulting in flooding



Note: Threats and hazards resulting from the main shock will be aggravated or recur during aftershocks, which will continue for months after the main shock. The HITRAC study did not take into account aftershocks and the possibility of

3. Scenario

additional tsunamis, which could drastically increase the amount of casualties from the event.

For planning purposes, the major impacts of the earthquake and corresponding tsunami are cited from the crest of the Cascade Range and West. However the disruption of critical lifelines and corresponding economic impacts will likely affect all counties in Oregon.

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Assumptions

The following assumptions are made with respect to the 9.0 – magnitude earthquake in the HITRAC modeling:

1. Epicenter 95 miles west of Eugene, OR (45.73 N, 125.12 W)
2. Length: 850 km, width: 100 km, depth 2 km
3. Strike: 345, dip: 13, slip 90
4. Movement: 3.55X10 dyne-cm
5. Fault ruptures to the north at 2.5 km / second
6. Event occurs February 6, 2012, at 0941 am PST (outside of tourist season)
7. No aftershocks

It was assumed that ground shaking would last four to six minutes, and the possibilities of liquefaction and landslides were included in the analysis.

Planning by Oregon Office of Emergency Management was done with the assumption that the state would suffer many additional aftershocks and the possibility of additional tsunami inundation.

Table 4-1 Estimated Oregon deaths and injuries from Cascadia event

Estimated Oregon deaths and injuries from Cascadia event		
Ground Shaking	Injuries	14,109
	Deaths	671
Tsunami	Injuries	897
	Deaths	643
Totals	Injuries	15,006
	Deaths	1,314

4. Assumptions

Table 4-2 Estimated Oregon tsunami casualties and deaths from Cascadia event

Estimated Oregon Tsunami Casualties and Deaths				
Location	Nighttime Population at Risk (PAR)	Daytime PAR	Injuries	Deaths
Cannon Beach	370	990	110	240
Coos Bay	210	150	30	30
East Astoria	820	960	20	10
Newport	250	420	50	20
Port Orford	40	40	10	10
Gearhart/Seaside	720	730	50	10
Warrenton	2720	3840	550	280
Rockaway Beach	75	70	4	1
Lincoln City	370	420	70	40
Waldport/Yachats	80	90	3	2

4.1 General Assumptions

- An earthquake of this scale would quickly exceed state and local resources. It is anticipated that a significant amount of external resources will be required for a disaster response. Oregon will immediately request support from FEMA and the Governor immediately proclaims a State of Emergency and requests that the President declares a disaster;
- The President immediately declares a Major Disaster, making Federal assistance available under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act);
- DHS and FEMA immediately implement the Catastrophic Incident Supplement (CIS) to the NRF and begin mobilizing Federal resources;
- The State of Oregon Military Department, Office of Emergency Management, Emergency Operations Center (EOC) is fully activated;
- All local (county and city) Emergency Operations Centers (EOC's) in impacted areas experience varying levels of damage and are understaffed, but are at least partially operational. County and State agency EOC's within tsunami inundation or liquefaction areas may not be functional;
- FEMA Region X Regional Response Coordination Center (RRCC) in Bothell, WA, is activated to its highest level;
- OEM and state agency ESF partners will coordinate Statewide Mutual Aid Agreements and activate the Emergency Management Assistance Compact (EMAC). Established local and regional mutual aid agreements will be honored to the extent possible;
- On a statewide basis, all elements of the State Emergency Operations Plan have been activated;
- Oregon is not recovering from a previous disaster that could hamper response to this event;
- Due to the time of the year, tourist populations will be significantly lower, but will be a significant population that will need assistance;

4. Assumptions

- Significant aid from state and federal governments to local governments may not be available for at least 72 hours.

4.2 Severity of the Earthquake and Resultant Tsunami

The earthquake and resultant tsunami is so severe that:

- The response capabilities and resources of the local jurisdictions and the State are immediately rendered insufficient, overwhelmed, and exhausted;
- The incident escalates to the point at which the Federal Government implements the Catastrophic Incident Annex and Catastrophic Incident Supplement to the NRF.
- Alternate Emergency Operations Centers (EOC) and the State Emergency Coordination Center (ECC) may need to enact continuity of operations/government planning protocols due to damaged facilities;
- The hardest hit areas are initially isolated from re-supply by fixed wing air, ground, and sea transportation;
- The number of casualties and or displaced persons is large, possibly in the tens of thousands;
- Massive disruption of the area's critical infrastructure and lifelines (such as roadways, ports, airports, energy, telecommunications, and public health and medical systems);
- Damage to transportation, communication, and other infrastructure systems will isolate communities, creating pockets of inaccessible survivors within impacted areas.
- Shelters identified for use during other natural disasters may not be available in the impacted area.
- Significant shortage of emergency response and casualty / evacuee reception capabilities, equipment, and medical care occurs;
- Resources under the control of the State of Oregon are used where possible to assist affected local communities and augmented by Federal resources when they begin to arrive in-state;
- Upon receipt of the Presidential Declaration or Presidential Order, the Federal government will commit federal resources.

4.3 Local and State Capabilities and Unmet Needs Assumptions

As part of the development of this Cascadia Subduction Zone Catastrophic Annex, the State has identified local and regional capabilities that are likely to be needed after a catastrophic earthquake and corresponding tsunami. Projected major unmet needs are also identified.

4. Assumptions

The capabilities of State and local government are summarized below and in more detail in the ESF annexes and the Cascadia Subduction Zone County Response Information Annex.

Planning:

The State and all counties have comprehensive Emergency Operations Plans in compliance with requirements under Oregon Revised Statute 401.

Communications:

Local emergency communications systems will be compromised, but redundancies within the State systems could provide some capability for continued communication on a regional basis, such as HAM radio. Basic commercial communication systems will suffer the most damage and will get worse in the days to weeks after the event as backup generators fail.

Onsite Incident Management:

Local capabilities for onsite incident management are robust and generally well-organized during localized “normal” scale events, but will be insufficient by the scope and magnitude of this event, compounded by isolation due to damage to transportation infrastructure, and communications difficulties. Mutual aid and State resources to supplement local resources will be adversely affected and unable to render assistance because of damage to transportation infrastructure.

EOC Management:

Coastal EOC's may suffer degradation of functionality due to the initial earthquake and from secondary impacts. In addition, response personnel will be delayed in response due to commitments to personal and family safety and security. Due to transportation damage, essential personnel may not be able to get to their worksites. It's possible that Continuation of Operations Plans (COOP) may be required to establish alternate facilities for State and local EOC's/ECC's.

4. Assumptions

Critical Resource Logistics and Distribution:

Thousands of people will require feeding and other commodities due to lack of services, loss of residence, or that they are visitors or commuters who are stranded. Existing stockpiles of critical commodities are extremely limited. Supply by contractors and distribution will be severely compromised by overwhelming need and damage to transportation infrastructure. Oregon has pre-identified Incident Support Bases and State Staging Areas to receive resources and some County and local governments have identified staging areas, community points of distribution and other support locations. However it is likely that a number of these facilities will have been damaged by the event.

Volunteer Management and Donations:

Some jurisdictions have developed plans for integrating volunteer resources and managing donations. These plans can be adapted by individual jurisdictions to manage volunteer resources. It is anticipated that management and credentialing of volunteers will be an immediate and long standing need after the event.

Responder Safety and Health:

Damaged equipment, low force numbers and environmental concerns are likely to occur, resulting in significant physical hazards, and civil unrest may occur. Both will make responder health and safety a concern and will delay or disrupt response operations.

Public Safety and Security Response:

Local and State law enforcement mutual aid resources will not be sufficient to meet immediate needs. Statewide mutual aid that is available will have difficulty reaching the hardest hit areas initially due to damage to transportation infrastructure. The scale of this event will require public safety and security requirements for an unknown amount of time (several months or more). All of these situations will necessitate reinforcement and replacement of responders from other jurisdictions.

Animal Health Emergency Support:

Local nongovernmental resources for animal care will be overwhelmed by requirements for sheltering thousands of animals, including companion animals that accompany evacuees who are seeking shelter, as well as animals that are abandoned and require rescue. The evacuation of livestock may become necessary as disruptions to power, water, and transportation systems may adversely affect livestock operations.

4. Assumptions

Environmental Health:

Hazardous materials incidents will be numerous, particularly in heavy industrial areas near ports, waterways and along major transportation thoroughfares. Additionally, the lack of water and sanitation due to system damage will result in emerging public health crises in impacted areas. Most of the locally stored water supplies in tanks and small reservoirs will be depleted within 48 to 72 hours for fire, medical, and other critical services.

Firefighting Operations and Support:

Hundreds of fires are likely to be ignited in the aftermath of the earthquake. Ruptured natural gas lines will increase the probability of fire occurring in damaged areas. Local mutual aid fire and rescue resources will not be sufficient to meet immediate needs due to the number of ignitions, medical resources, rescue, and damage to infrastructure. Statewide mutual aid will provide resources but will have difficulty reaching hardest hit areas initially due to damaged transportation infrastructure. Fires may burn for extended periods, and many fires not immediately threatening human life may be left to burn.

Citizen Protection, Evacuation, In-place Protection:

Local evacuations will be required due to fires, lack of shelter, hazardous materials incidents, and emerging public health emergencies due to lack of water and sanitation. It is possible that the earthquake may cause one or more dams to lose structural integrity or to fail, resulting in the need to evacuate those below the dam. Local authorities, supplemented by State law enforcement will have resources for command and control, but competing requirements for traffic control, viable roadways, vehicles, transportation infrastructure repairs, and security issues related to bridges, airports, and port facilities may hinder evacuation support.

Urban Search and Rescue (USAR):

Hundreds of people are expected to be trapped in collapsed buildings and require rescue. Thousands more may be stranded in damaged buildings (such as high rises) and also require rescue. USAR resources in Oregon will not be sufficient to meet the required number of rescue missions, nor will Federal USAR resources within FEMA Region X be adequate. Resources from other regions will have a difficulty reaching the hardest hit areas due to transportation infrastructure damage.

Emergency Public Information and Warning:

Many jurisdictions have countywide or citywide public warning systems; these systems may be disrupted by the earthquake. Extensive use of the NOAA Weather Radio and EAS systems will be necessary to support the State's need to coordinate a network of public information dissemination. Highway reader

4. Assumptions

boards, airborne messaging and other non-traditional methods may be necessary to communicate within impacted areas.

Triage and Pre-hospital Treatment:

Thousands of people will require medical treatment; of those, many will require hospitalization or treatment for chronic conditions unavailable post-event. Emergency Medical Services (ALS and BLS) resources within fire departments will be devoted to firefighting and rescue missions. Damage to transportation infrastructure will limit the influx of resources and movement of victims. On-hand medical supplies will be exhausted within 48 hours. Many individuals will not have access to medical treatment during the first 72 hours after the earthquake. The lack of clean water, lack of sanitation, and lack of medical supplies exacerbates the problem.

Medical Surge:

Hospitals and other healthcare facilities in the hardest hit area will suffer structural damage, severely limiting treatment capabilities. Healthcare facility operations will be further affected by limited (24 hour) supply of generator fuel and lack of water. Damage to transportation infrastructure will limit influx of medical personnel and resources as well as the evacuation of patients. Hospitals in less severely impacted areas and outlying counties will be able to take patients. Many hospital beds in the impacted counties may not be available due to damage to buildings and support infrastructure.

Medical Supplies Management and Distribution:

Local hospitals and other healthcare facilities will immediately experience shortages of supplies due to demand and relatively limited onsite inventories. Re-supply will be limited by damage to transportation infrastructure. Many rural locations have a limited supply of pharmaceuticals and will be unable to supply those in need. Many chronically ill people will lose supplies of medicine and/or supplies immediately, or run out of them within weeks of the event.

Mass Care:

It is estimated that many shelters will be unavailable initially due to structural damage and cleanup requirements. Given that thousands of individuals will be requiring shelter across Western Oregon, there will be significant shortfall in actual shelter capacity. Transportation issues will hamper resupply of operational shelters, and limit evacuation of survivors to non-local shelters.

Fatality Management:

HAZUS estimates the number of fatalities in the thousands, and many more fatalities could occur as a result of aftershocks and additional tsunamis after the initial event. Local and state coroner / medical examiner resources and resources available through mutual aid in Region X will be overwhelmed by the number of fatalities and the requirements for transportation, storage, identification, and coordination with families, both immediately and over the long term. Resources from other regions will need to be requested, but will have difficulty reaching the affected area due to damage to infrastructure. Challenges with managing the number of and respectfully handling fatalities could have negative effects on an already stressed public.

Structural Damage and Assessment:

Local public works departments and contractor resources will not be sufficient to meet immediate demand for emergency debris removal or for establishing sites for staging equipment and assisting with public works and infrastructure repair. Demolition of damaged structures will continue to create high demand for contractor resources as recovery proceeds. Identification of hazardous waste within the debris field will also be an issue. Simultaneously, public and private contractor assessment / inspection resources will be overwhelmed and dependent on pre-qualified engineers and inspectors from outside the region for rapid assessments of structural damage to critical facilities, infrastructure, housing, and commercial structures. The occurrence of earthquake aftershocks will require re-inspection, as many critical infrastructure components may require re-inspection on a regular basis for months or years.

Restoration of Transportation and Infrastructure Lifelines:

Lifelines for this purpose are defined as water, wastewater, power, natural gas, telecommunication, fuel distribution, and transportation systems. Power restoration, communications, major water and sewer facilities will require significant repairs. Coastal communities may have a total loss to all infrastructure located within the inundation area and beyond due to the intensity of shaking. Damage to water distribution and sewer collection systems may take months, requiring temporary above ground systems. Numerous water pumping stations as well as sewer collection lift stations will be impacted. Shutdown of and damage to petroleum refining, pipeline, storage, and distribution systems will create an immediate shortage of fuel, including fuel for ground transportation, air transportation, and generators. Local governments do not have extensive supplies of fuel for sustained operations. Coastal ports will be severely if not totally destroyed. Rapidly repairing these to a usable condition (priority of Coos Bay, Newport and Astoria due to their ability to handle larger vessels) is critical to bring relief supplies and responders into the coastal areas.

4. Assumptions

Major transportation links may take two or more years to repair. The following estimated damage is expected:

- Failures of key highways are anticipated throughout the CSZ impact zone. I-5 is anticipated to be severely impacted throughout the state and it is likely that all east/west routes to the coast will be unusable. Highway 101 on the coast is expected to be unusable at best and completely destroyed in some areas. Repair of Oregon roadways will take years, many roadways will simply be abandoned.
- Bridges will be destroyed throughout the state and many severely damaged.
- Surviving bridges may be temporarily inaccessible due to failure of approaches.
- Most airports in Western Oregon will be impacted.

Table 4-3 Western Oregon Airport Damages from Cascadia event

Airport Name	City	Latitude	Longitude	50% damage model	90% damage model
INDEPENDENCE STATE	INDEPENDENCE	44.8669529	-123.1982329	Slight	Complete
SILETZ BAY STATE	GLENEDEN BEACH	44.87691688	-124.0285049	Complete	Complete
SOUTHWEST OREGON REGIONAL	NORTH BEND	43.41709754	-124.2460052	Complete	Complete
BANDON STATE	BANDON	43.08645591	-124.4078497	Complete	Complete
M McNARY FIELD	SALEM	44.90952233	-123.0024857	Slight	Moderate
PORTLAND-HILLSBORO	PORTLAND	45.54060562	-122.95018	Slight	Moderate
ALBANY MUNICIPAL	ALBANY	44.63780013	-123.0594301	Slight	Severe
MAHLON SWEET FIELD	EUGENE	44.12457795	-123.211958	Slight	Moderate
HOBBY FIELD	CRESWELL	43.93076128	-123.0072641	Slight	Moderate
COTTAGE GROVE STATE	COTTAGE GROVE	43.7998399	-123.0289536	Slight	Moderate
GRANTS PASS	GRANTS PASS	42.51011196	-123.3879755	Slight	Severe
ILLINOIS VALLEY	CAVE JUNCTION	42.10359479	-123.6824027	Moderate	Complete
ROGUE VALLEY INT. - MEDFORD	MEDFORD	42.37421692	-122.8734861	Slight	Moderate
ROSEBURG REGIONAL	ROSEBURG	43.23877774	-123.3558476	Slight	Moderate

4. Assumptions

SCAPPOOSE INDUSTRIAL AIRPARK	SCAPPOOSE	45.77102226	-122.8618188	Slight	Moderate
MC MINNVILLE MUNICIPAL	MC MINNVILLE	45.19443899	-123.13593	Slight	Complete
TILLAMOOK	TILLAMOOK	45.41823655	-123.8143693	Complete	Complete
CORVALLIS MUNICIPAL	CORVALLIS	44.49718821	-123.2898154	Slight	Severe
FLORENCE MUNICIPAL	FLORENCE	43.98281138	-124.1113551	Complete	Complete
NEWPORT MUNICIPAL	NEWPORT	44.58035578	-124.0579022	Severe	Complete
ASHLAND MUNICIPAL-SUMNER PARKER FIELD	ASHLAND	42.1902783	-122.6606145	Slight	Slight
PORTLAND-MULINO	PORTLAND-MULINO	45.21631949	-122.5900695	Slight	Severe
LENHARDT AIRPARK	HUBBARD	45.18039284	-122.7434106	Slight	Complete
AURORA STATE	AURORA	45.24713339	-122.7700412	Slight	Complete
PORTLAND INT.	PORTLAND	45.58871669	-122.5974856	Slight	Severe
PEARSON FIELD	VANCOUVER	45.62044697	-122.6564739	Slight	Severe
PORTLAND-TROUTDALE	PORTLAND	45.54935556	-122.4012356	Slight	Severe

- Highway, airport, seaport and damage to the rail system will halt movement of supplies and responders. Fuel supplies will be interrupted until inspections and repairs are made to the refineries and rail system. Some segments of the rail system, such as rail bridges in some areas will sustain extensive damage that could take years to repair or replace.

Economic and Community Recovery:

Widespread damage to housing will create urgent requirements for temporary housing and other solutions to encourage residents to return. Timelines for recovery of transportation and utility infrastructure will affect the pace of economic recovery.

4.4 County Impact Assumptions

See pages 2-1 to 2-7 of this plan, and Component 3- *the Cascadia Subduction Zone Plan - County Response Information Annex* for County specific impacts and shortfall assumptions.

4.5 Non-governmental and Volunteer Organizations

OEM may provide input into planning efforts of non-governmental and volunteer organizations. This participation is intended to enhance the capabilities of these organizations in the response and recovery phases of an emergency or disaster.

- Unless the response role is inherently governmental, non-governmental and private-sector organizations are encouraged to develop and maintain capabilities to respond to and manage a complete spectrum of incidents and emergencies. Coordination generally occurs at a local level in the State of Oregon.
- Local government coordinates most volunteer organization participation in the response and recovery phases of any emergency or disaster.
- U.S. Citizen Corps and local Citizen Corps Councils implement and maintain those volunteer organizations, e.g. CERT, Medical Reserve Corps, Volunteers in Police Service, etc., that may be utilized during the response and recovery phases of an emergency or disaster.
- Volunteer Organizations Active in Disaster (VOADs) may be utilized during the response and recovery phases of an emergency or disaster and are coordinated and utilized at a local government level.

4.6 Private-Sector Coordination

Private-sector organizations may be affected by direct or indirect consequences of the incident, including privately owned critical infrastructure, key resources, and those main private-sector organizations that are significant to local, regional, and national economic recovery from the incident.

4.7 Tribal

During and after emergencies, the Office of Emergency Management (OEM) will communicate and coordinate with Tribal Nations to ensure that responses are coordinated and that any potential damage assessment information is captured. Oregon Tribes often rely on pre-established relationships with local governments for assistance in emergency situations.

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Mission

5.1 Introduction

In a catastrophic event affecting our citizens, the State of Oregon mission is to provide lifesaving and life-sustaining assistance and resources necessary to supplement local, regional, tribal, and private-sector efforts immediately following a catastrophic Cascadia Subduction Zone Earthquake and resultant tsunami in the State of Oregon in order to alleviate the dire impacts of the incident and encourage the recovery of the affected areas.

5.2 General County Priorities *(See Component 3- the Cascadia Subduction Zone Plan - County Response Information Annex for further detailed information)*

In the impacted areas the following activities will be required; however the priority of action will vary considerably based on proximity to the coast. The order of these actions is difficult to establish as multiple activities will have to occur almost simultaneously by different groups.

- Establish physical communications for situational awareness to coordinate response activities locally. Implement alternate communications procedures to establish communications pathways and maintain functional and interoperable communications for responders.
- Rescue survivors and establish safe areas with resources to support population.
- Establish logistical support for critical supplies of food, water, shelters (i.e., tarps and blankets), medical, baby formula, diapers, etc.
- Fire suppression and utility stabilization.
- Provide support for health facilities, personnel and supplies.
- Fatality management assistance – Establish center and staff for this function.
- Road-clearing, debris removal and disposal, and road repair.
- Environmental response and protection of public from hazardous materials.
- Public information and warning – validate and provide internal and external public messaging.

5. Mission

- Conduct situational assessment in coordination with local responders including emergency management.
- Provide support for emergency operations.
- Adopt an emergency management structure that manages resource shortages.
- Supply emergency water, shelter, and sanitation needs for response operations personnel.
- Conduct debris clearance and disposal.
- Stabilize and provide critical utilities for priority infrastructure: water, wastewater, power, and natural gas.
- Establish lines of supply (air, sea, rail, and roads) and re-establish operations in damaged sea and air port areas.
- Provide acute care (hospitals and EMS) – establish alternate standards of care when necessary.
- Provide safety, security, and support to emergency response operations.
- Coordinate air operations for emergency response and damage assessment.
- Conduct safety assessments including residences, bridges, governmental and industrial facilities.
- Implement evacuation / movement of victims for short term sheltering or voluntary evacuation from the impacted area.
- Execute patient transport.
- Establish public health guidelines and messaging (food, water, vector control, food and water quality inspection and surveillance).
- Conduct mass fatality operations.

5.3 State of Oregon Priorities

Within the first 24 hours: Situational awareness will be immediately impacted and progressively reduced as communication systems fail. The State EOC would immediately be activated and all available staff assigned duties to support the state-level response.

A Gubernatorial Proclamation must be promptly drafted, though the Governor may initiate this process by making an emergency assessment and verbal proclamation and then request a Presidential Declaration.

Prescribed messaging must be modified for the circumstance as much as possible and released on all available communications media. For example tsunami evacuation notices, airspace restrictions, general guidance to populations regarding safe and unsafe actions, precautions for natural gas, etc.

5. Mission

Amateur radio contact must be established throughout the state as quickly as possible. The statewide situational picture must be developed by any available means. Self-assessment by every state agency must be conducted and reported. A total agency assessment will take days; but an initial assessment of personnel, major operational nodes and initial actions should be reported in the first 24 hours.

The State EOC will submit pre-scripted mission assignments requesting pre-identified response resource shortfalls from the Federal Government, EMAC, NGO organizations and other assistance options. The State EOC staff must begin preparing to expand quickly and also to host a large contingent of federal resources.

The Adjutant General will name an Oregon National Guard Joint Task Force Commander who will begin assembly operations. An Aircraft Control Center must be established immediately and planning for flights to the coastal counties initiated. Coordination with media outlets likely to request flight authorization into the impacted areas must commence within the first hours. Rotary air flights must expect to push selected resources (medical, communications, and logistical liaison) to establish logistical support & refueling sites and will conduct rescue, relocation, patient transfer, supply, roadway reconnaissance and search missions. The first flights must occur within 24 hours of the incident, based on flight conditions. Coordination with the FAA, FCC and USCG must begin strong and get stronger over time.

Priorities for key agencies need to be established early and implemented aggressively. For example Transportation will want to establish the status of key lifeline roadways and identify priority sites where refueling from outside sources will be required. In addition, they will want to develop initial guidance for US DOT operations if all communications are lost for a period of time. It is extremely likely that all state agencies will be called upon to provide assistance.

Due to the likelihood communications will be extraordinarily limited after the first 24 hours; state agencies must set the initial operational priorities for their federal partners within the first 24 hours. These federal partners will then be able to continue a 'coordinated' response operation absent direct communications with state agencies.

FEMA Headquarters will likely establish initial operations based on their contingency planning. For additional, detailed responses and courses of action, see section 6.2.2.

Following a major Cascadia Subduction Zone earthquake and resultant tsunami the following State response priorities will be (but not limited to):

5. Mission

- Public information and warning – validate and provide internal and external public messaging.
- Operational coordination across multiple jurisdictions and emergency management operations, from local jurisdictions through federal responders.
- Situational assessments – establish a common operating picture and get necessary situational data to enable priority decision making.
- Establish alternate communication pathways with State agencies, counties, and FEMA.
- Establish geographical response and recovery areas within the State for response and recovery operations.
- Coordinate mass search and rescue operations in multiple geographic areas.
- Establish and maintain interoperable (operational) communications.
- Establish logistical bases and staging areas to provide basic sustenance and shelter capacity.
- Facilitate debris clearance and disposal and provide expert consultation to local jurisdictions.
- Prioritize emergency power and generator re-fueling and establish fuel lines of supply jointly with fuel vendors.
- Restore and sustain essential services (public and private).
- Supply emergency transportation, water, sanitation, and medical supplies / needs for response organizations.
- Establish air operations for emergency response and damage assessment.
- Establish lines of supply: air, sea, rail, and roads.
- Coordinate statewide requirements for public utility repair materials such as poly sewer pipe, temporary pump stations, road culvert, etc.
- Conduct safety assessment (threats and hazard identification).
- Provide safety and security to support emergency response organizations.
- Execute patient evacuation and movement.
- Facilitate implementation of health and medical services in unusual circumstances, provide pharmacological support, assist with medical security and implement patient transport plans.
- Determine requirements for and coordinate delivery of engineers and similar experts to conduct structural evaluations, including the academic community.
- Conduct and support mass fatality operations in coordination with the State Medical Examiner.

5. Mission

- Support mandatory and self-evacuations, including sustenance, nominal shelter materials, childcare needs and set up evacuation business operations to control traffic during response and initial recovery operations over roads with reduced capacity.

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Plan Execution

This section describes the execution of the coordinated local, State and Federal response.

6.1 Senior Leaders Intent

The Governor of Oregon expects all available state personnel to function jointly in an effort coordinated through the State EOC to promptly and effectively establish response and recovery activities in support of the impacted jurisdictions. This includes direct response, coordinating activities, requesting augmentation and assistance, and directing the activities of federal responders.

To ensure that the State and Federal incident objectives, priorities, and operations align for the effective allocation, integration, and use of resources at the field level, it is the senior leaders' intent to rapidly establish a Unified Coordination Group (UCG), using Incident Command System concepts and principles consistent with NIMS, to achieve the following:

- Ensure / protect responder and public health and safety, and to save and sustain life;
- Stabilize the situation;
- Provide for basic human needs to include: food, water, shelter, and emergency medical care and services;
- Minimize damage to and protect property;
- Restore and stabilize critical infrastructure and key resources;
- Support reentry, repopulation, long-term recovery, and future hazard mitigation.

Senior Leadership intends for the successful end state of response operations following a catastrophic Cascadia Subduction Zone earthquake and resultant tsunami to have achieved the following:

- Complete all lifesaving operations;
- Stabilize essential infrastructure;
- Re-establish life support functions, and;
- Complete the transition to long term recovery.

6.2 Concept of Operations

The concept of Operations described in this section is applicable from the period immediately after the earthquake and 60 days after the earthquake (E to E+60 days). Although some activities included in the operation may extend beyond this timeframe, (particularly recovery related activities which are only touched briefly upon in ESF-14). The plan also does not include preparedness activities that take place prior to the earthquake and tsunami. The need for enhanced and funded community preparedness and caching of supplies is described in the Cascadia Subduction Zone Plan - County Response Information Annex.

6.2.1 General Sequence of Response

The operational time-frame reflects three phases during the first 60 days after the earthquake:

Immediate impact: E to E+72 hours.

Sustained response: E+72 hours to E+14 days.

Relief: E+14 days to E+60 days.

For purposes of the operational time-frame, activities occurring after the 60-day period (E+60) are described as long-term recovery. Due to the immense scale of this event, this time period will be identified when the following conditions occur:

- Response missions, such as life-safety and property protection, diminish and conclude.
- Stabilization and reconstruction activities increase and become the focus of operations.
- The transition of activities back to local government accelerates.

However, the transition from response to recovery is gradual and cannot be defined by specific timeframes.

6.2.2 Activation

The activation of the joint local/ State/ Federal response is summarized in this section.

Local, State and Federal Operations Centers

The earthquake and resulting tsunami will result in the immediate activation of local and State command coordinating facilities including:

- The State Emergency Coordination Center located In Salem, Oregon.

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- EOC's in counties, tribal nations and cities affected by the earthquake and tsunami and by unaffected areas of Oregon from which resources may be needed.
- Other local, NGO, and private sector EOC's.
- Agency Operation Centers (AOCs) of all State agencies and departments with the response roles as stated in the Oregon EOP and corresponding ESF's. It is recognized that many State facilities within the impacted area may be unavailable due to structural damage and damage to transportation infrastructure.

This catastrophic earthquake / tsunami also results in the immediate activation, or elevated levels of activation of all DHS command coordinating facilities, including:

- FEMA Region X – RRCC
- FEMA National Response Coordination Center (NRCC)
- FEMA RRCC's in unaffected area
- DHS National Operations Center
- The regional and national operating centers of:
 - Other DHS components, including those of the U.S. Coast Guard (USCG);
 - Other Federal Agencies, including entities with coordinating, primary, and support roles within Emergency Support Functions (ESF's) defined under the NRF;
 - DoD, including U.S. Northern Command, Joint Director of Military Support, and the National Guard Bureau;

FEMA Region X will deploy a liaison to the Oregon ECC in Salem upon request, but in an event of this scale, likely immediately upon the State ECC activation. If possible based on conditions, within 24 hours, FEMA will deploy an Incident Management Assistance Team (IMAT) to the State ECC to initiate coordination of Federal support.

Unified Coordination Group (UCG)

Joint State / Federal operations will be conducted under the leadership of a Unified Command Coordination Group in accordance with Unified Command principles. The Unified Coordination Group (UCG) will facilitate effective utilization and integration of State and Federal resources through unity of effort and will set priorities and objectives through use of a joint Incident Action Plan (IAP). The Unified Coordination Group will be established within 24 hours of the earthquake, and located at the Oregon ECC in Salem, and then transferred to the Joint Field Office (JFO) when FEMA and Oregon Emergency Management establish that facility.

6.2.3 Response Strategy

The overarching strategy to complete the mission is to execute an integrated approach in which response capabilities are increased as access into the most severely impacted areas is obtained. The means of access to impacted areas will include the use of available land routes, air transport, maritime transport or a combination thereof.

As access is gained, resources will be moved into affected communities to support life-saving activities, including local efforts for firefighting, public safety, sheltering, commodity distribution, and medical treatment. The Unified Coordination Group will lead a joint State and Federal operation that will provide support for field level incident response through integration of State and Federal resources. The effective staging, movement, and support of resources are critical aspects of this structure. Major components are as follows:

JFO (Joint Field Office): Joint State / Federal operations will be initiated at the State ECC. FEMA and Oregon Emergency Management will establish a JFO (Joint Field Office) as close as practical to impacted areas within days of the earthquake and corresponding tsunami.

Area Field Offices (AFO's): FEMA and the State will also establish AFO's (Area Field Offices) in each of the affected counties (depending on the availability of suitable and sustainable undamaged space), to provide forward support for State / Federal coordination. FEMA and the State will establish AFO's as available facilities can be accessed and safety inspections can be conducted.

Response Organization: The response strategy will be implemented using a combined geographic and functional organization, one allowing for decision making at the lowest level possible and to facilitate integration of resources at the field level. The actual organization will be determined by the Unified Coordination Group based on the specifics of the incident(s).

Federal Logistics: The Federal logistics support system includes a combination of mobilization centers and staging areas to receive and distribute response resources. It is understood the National Response Framework Catastrophic Incident Supplement will be implemented immediately and provide an initial "push" of resources throughout Oregon. Specific resources for State agencies and individual counties are located in the Individual ESF Annexes and the Cascadia Subduction Zone County Response Information Annex of this plan.

Other Staging Areas and Logistics Support Facilities: It will become necessary for OEM along with responding State agencies to establish staging areas for different mission tasks e.g., firefighting, search and rescue, medical response, and DMORT teams. Staging areas in the vicinity of the impacted areas are

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identified in the Mass Commodities Distribution annex of the Oregon EOP. It is recognized that due to the severity of this incident that alternate staging areas and logistics support facilities may need to be determined rapidly to meet the needs of response. Location of these alternate staging areas and logistics support facilities will be determined in coordination with local government officials.

Transportation Infrastructure, Utilities, Housing, Lodging, and Retail Services:

Damage will greatly reduce the capabilities to support the influx of response teams, assessment teams, repair crews, shelter workers, and others deployed to severely impacted areas. This will necessitate the establishment of base camps to provide logistical support for the deployment of responders into the impacted areas. Location of these base camps will be determined and in coordination with local government officials.

Community Points of Distribution (C-PODs): FEMA and OEM will coordinate with local government officials to establish sites for CPODs. Some C-POD locations have been pre-established by Oregon counties. C-PODs will be utilized for the distribution of critical supplies, such as water, food, tents, blankets, hygiene, sanitation, and medical supplies, to the affected populations. Local government officials will make the determination regarding location of C-PODs.

Access to Impacted Areas: The joint State and Federal operation will emphasize the reestablishment of the transportation system to facilitate the movement of resources into impacted areas from Federal and State staging areas. Lines of supply and transportation will include:

- **Priority land routes** will be dependent on damage and or closure of key bridges, freeways, and local arterial routes.
- **Air routes**, utilizing rotary wing aircraft, and established helispots, helibases, heliports, regional airports, and temporary sites for landings. Upon repair and assessment of airports and airfields in impacted areas, it is anticipated fixed wing aircraft could augment supply and transportation.
- **Water routes**, utilizing surviving State of Oregon agency marine and riverine assets, USCG vessels, U.S. Maritime Administration (MAEAD) vessels and vessels from the Department of Defense (DoD).

6.2.4 Objectives for Response

For the response to this earthquake / tsunami, the objectives for the three phases of response (immediate impact, sustained response, and relief) are summarized below:

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Immediate Impact: E to E+72 Hours

Establish Interoperability Emergency Communications: Deployment of emergency communications assets will be necessary to support the incident response organizations as well as the reestablishment of regional and State communications systems.

Save Lives and Protect Public Safety: Fires, structural damage, and search and rescue will require extensive resources. Law enforcement resources will be necessary to conduct life-safety, secure critical infrastructure and supplies, and maintain public order.

Gaining state-wide situational awareness of response needs is critical to achieving this objective. County Emergency Managers and responders will provide as soon as possible (via the best operable communications system) the extent of damage according to priority. The report should include but not be limited to the following information:

Priority I (within the first 6 hours):

- Locations of collapsed structures with trapped persons.
- Status of communications systems to include broadcast media.

Priority II (as soon as information is available):

- Status of transportation infrastructures, i.e., bridges, roads, etc.
- Locations of major firefighting efforts and out-of-control fires.
- Locations to provide critical medical assistance.
- Known hazardous material releases and its impact on the public.
- Operational capability of critical facilities, i.e., hospitals, sewage and waste stations, electrical substations, etc.
- Public safety needs, i.e., security, traffic control, and law enforcement.
- Public information needs.

Provide Medical Care: Injuries will far exceed the available resources for medical treatment. It will be necessary to move medical personnel and supplies into impacted areas in order to supplement local medical response resources and to evacuate patients who cannot be treated appropriately at the local level. Medical supplies and pharmaceuticals will be used up quickly and will need resupply.

Establish Lines of Supply and Transportation: The movement of people and resources into the impacted areas will be significantly affected by the damage to the transportation infrastructure. It will be necessary to establish and maintain land, sea, and air routes in order to move first responders, engineers, shelter-

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workers, and other resources in to the impacted areas and to move the injured and evacuees out of the impacted areas.

Sustained Response: E+72 Hours to E+14 Days

Coordinate the flow of out of state materials, supplies and personnel. The scale of this event will require enormous out of state assistance. It will be necessary to coordinate the requests, the arrival and distribution of materials, supplies and personnel to various State staging areas. Strategic airlift resources arrive at staging areas and are offloaded to air transport, including USCG, CBP, and DoD rotary wing aircraft. Maritime ship-based staging and operations may be established to deliver temporary fuel, water, and ship based care. The USCG leads port reconstitution efforts to re-establish port continuity.

Reestablish the Medical and Public Health Systems: Damage to hospitals and smaller health care facilities, infrastructure providing power, water and sanitation to facilities, assisted living facilities, laboratories, medical suppliers, and injuries and dislocation of trained personnel will limit in-State capabilities to treat the injured, medically fragile, sheltered populations, and those located in long-term facilities. It will be necessary to establish authorized alternate care sites and other mechanisms for treatment and care. Improving the condition of hospitals and the ability of public health systems to operate within the impacted areas will be a priority.

Provide Care and Shelter for the Displaced Population: Requirements for sheltering will exceed potential shelter capabilities. Structural damage to pre-identified shelters will increase demand. Additional shelters, feeding operations, and the continual distribution of water and other resources will need to be implemented to sustain the population. It will also be necessary to care for thousands of displaced and abandoned animals.

Reduce Hazards to the Population: Resources will be deployed to assess, respond to, mitigate, and eliminate threats to public safety, including hazardous materials spills and releases, debris, damaged structures, crime and civil unrest and potential public health threats.

Conduct Mass Fatality Operations: Fatalities will greatly exceed local mass fatality response capabilities. Additional resources and personnel will be needed to recover, transport, store and process the remains of the deceased.

Relief E+14 to E+60 Days

Provide Interim Housing for the Displaced Population: Damage to housing will prevent residents from returning to their homes. This will necessitate the development of interim solutions that can meet the needs of the displaced

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population until permanent housing can be reestablished. Solutions may involve transportation and temporary resettlement out of the impacted areas.

Restore Infrastructure and Public Services: Prioritization of services, including repairs and the identification of services to temporary facilities will be necessary. Coordination between roadway repair and other infrastructure services will need to occur to maximize restoration.

Establish Temporary Transportation Capabilities: Temporary transportation mechanisms will be necessary to overcome damage to transportation infrastructure, particularly for temporary bridges and the rail system that will be critical to the economic recovery of the area.

6.3 Courses of Action (COA)

For the purposes of this document, a “Course of Action” is defined as the sequence of activities that an entity may take to accomplish a mission. Multiple COA may be available to accomplish a mission. COA are in general State and Federal alternative actions that will be taken to support local response operations. Considerations are presented for each COA. Given incident-specific circumstances and the necessity for coordination with State and local governments to identify required resources, it is likely that multiple COA will be implemented simultaneously to carry out the mission.

Detailed Agency and County specific priority, assets, capabilities, operational challenges and support shortfalls and needs information are described in the ESF annexes and the Cascadia Subduction Zone County Response Information Annex.

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6.3.1 COA for the Objectives in the Immediate Impact Phase

E to E+72 Hours

Objective: Establish interoperable emergency communications

Course of Action: Establish State and Federal coordination

Task: Activate Joint Federal and State Communications Unit.

- Federal and State communications managers are generally responsible for maintaining respective channel plans.

Task: Activate Joint Federal and State frequency plan and designate on-scene frequency managers.

- Refer to Oregon Statewide Communications Interoperability Plan and the FEMA Region X 2011 Emergency Communications Plan-State of Oregon Annex for frequency and channel plan information.

Course of Action: Deploy land-based communications resources

Task: Coordinate the deployment of land-based Federal mobile communications resources to provide support for emergency communications capabilities. Initial deployment to State ECC, Federal ISB(s), national logistics staging areas, and operational area EOC's (County EOC's).

- MERS are mobile, specifically trained, land based FEMA communications assets.
- Self-sustaining, modular, and can be tailored to incident-specific conditions.
- Potential sources include: MERS units from all six detachments, DoD communication teams, and other Federal agencies.

Limitations/Challenges:

- Best-case timeframe for MERS transportation and setup is 72 hours, movement to field locations constrained by damage to infrastructure.

Task: Coordinate the co-use and deployment of surviving State agency communications equipment with local governments as an interim solution to get situational awareness, establish communication, and begin processing requests for assistance within impacted areas.

Course of Action: Support temporary restoration of public sector communications networks and public warning / alert systems.

Task: Deploy resources to support reestablishment of Public Safety Answering Points (PSAP's), use of mobile 9-1-1 systems.

- State systems have significant redundancy and backup capability.

Task: Deploy assets to support backup to the following systems, including towers and transmitters: State ECC, OSP, etc.

Limitations/Challenges:

- Will require close coordination between MERS / State ECC, most systems are line of site, and towers require power to operate.

Course of Action: Develop restoration prioritization for critical private communications systems and support reconstitution.

Task: Prioritize restoration of private-sector communications systems upon which critical functions are dependent, such as emergency functions, health and sheltering, and private sector financial systems.

- Improve ability to reach public with information regarding incident.
- Increase coverage of public information messages.

Limitations/Challenges:

- Full system repair and restoration requires weeks to months.
- Rapid restoration of the financial transaction system is critical to expediting recovery.

Course of Action: Deploy communications resources to support State and local system restoration efforts.

Task: Prioritize communications systems restoration in areas critical for emergency communications and continuity of government operations.

- State ECC and local governments prioritize and implement repair and restoration operations.
- Mutual aid and other in-State resources may be available to assist in this task.

Limitations/Challenges:

- Radio transmitter/repeater sites will be non-functional.
- Limited operational State and local microwave-based communications will be overloaded with very high volumes of emergency responder traffic.

Task: Deploy mobile / deployable assets (e.g., mobile towers, satellite telephone systems) and repair / installation teams.

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Limitations/Challenges:

- Damage to infrastructure may delay delivery of equipment teams. Teams will require logistical support.
- Amateur Radio Emergency Service (ARES)/Radio Amateur Civil Emergency Service (RACES) will be operational but may be delayed in deployment due to hazards and roadway/bridge damage.
- Limited mass battery charging capability will restrict responder communications.

Course of Action: Coordinate delivery of private-sector communications capabilities to residents.

Tasks: Facilitate private sector repair efforts to enable communications between residents and responders / local governments. Provide temporary means to reestablish phone service for residents.

- Private-sector communications and power company repair efforts are coordinated through Oregon PUC liaison in the State ECC.

Objective: Save lives and ensure public safety

Course of Action: Gain situational awareness on conditions and safety of impacted areas and needs of impacted communities.

Task: Establish air operations for emergency response and damage assessment.

Limitations/Challenges:

- Landslides and earthquake damage will make all roads over the coast range and many in the I-5 corridor to be impassable. Railroads will be severely damaged and seaports will either be destroyed or severely damaged. Because of these impacts, air operations will be critical to:
 - Aerial assessment of damages
 - Use aerial repeaters to enhance communications in damaged areas.
 - Provide aerial messaging to isolated areas.
 - Receive and deliver commodities into the affected area.
 - Insertion of teams of responders and personnel to provide life-saving assistance to impacted areas.
- Primary airport in Oregon surviving the event will be Robert's Field in Redmond. It is designated as the Federal Incident Support Base (ISB).
- Major airports in the I-5 Corridor sustain some structural damage, but could be made operational fairly quickly.
- Coastal airports are all heavily damaged; Newport and Port Orford airports have some resiliency and may be suitable for smaller aircraft after an assessment of their ability.
- Damaged roads that are impassable for weeks or longer will impede the typical ground damage assessments.

Task: Utilize information acquired from communications with impacted areas, on-the-ground responders, geospatial data and modeling, aerial observation and other means to gather necessary information to ensure safety and efficient response.

Limitations/Challenges:

- Information from all sources needs to be shared, analyzed and coordinated.

Task: Conduct damage and safety assessments.

Limitations/Challenges:

- Impacts over a large area of Western Oregon cause an immense amount of buildings, roadways, bridges and hazardous material storage areas that are significantly damaged and require inspection.
- Limited number of in-State, trained building inspectors certified in Safety Assessment would be quickly overwhelmed.
- Prioritization of these limited assets would be paramount.
- Safety and damage inspectors will be hampered by transportation challenges in their ability to conduct assessments, or will simply be unable to report to work.

Course of Action: Deploy State teams and assets to assist County response.

Task: Receive requests for assistance from impacted areas and quickly but safely deploy available State and mutual aid teams and assets to assist.

Limitations/Challenges:

- Deployment before support systems are in place will strain limited resources.
- Communications need to be established to get correct resources and personnel to where they are most needed.
- Prioritization of limited State teams and assets needs to be clear.
- Ensure available transportation and safe, accessible routes to deploy responders.

Task: Reduce hazards: Suppress fire, contain Hazardous Materials

Limitations/Challenges:

- This event will have an enormous impact on the firefighting and rescue operations of the State. Of the 419 fire stations in Western Oregon the earthquake and resultant tsunami will have the following impact based on the analysis (50th & 90th percentile case):
 - 200-253 completely destroyed
 - 0-5 severely damaged
 - 6-8 moderately damaged
 - 27-102 slightly damaged
 - 51-186 with no damage
- Countless fires statewide ignite after the event; in urban areas, dozens of large

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fires could merge into conflagrations destroying hundreds of blocks.

- Use of significant forest fighting capacity in the state will be needed but may be limited by jurisdictional authority.
- Alternate fire suppression water sources and pumps will be needed to suppress fires.
- There are approximately 721 HAZMAT sites identified west of the Cascades. It will be assumed that there will be a large number of hazardous material incidents occurring after disaster event.
- Responders dealing with HAZMAT incidents will reduce the response force for fire and USAR missions.

Task: Conduct search and rescue operations.

Limitations/Challenges:

- Based on the HITRAC CSZ study, an estimated 25,000 people are injured as a result of collapsed structures, with a large portion of those people needing SAR.
- USAR needs after the disaster will exceed the local resources. USAR resources are concentrated in the Willamette Valley and will likely be unable to reach other impacted areas of the State.
- USAR resources will simultaneously be used for firefighting, hazardous materials, and emergency medical services (EMS) response and may not be available.
- Coordination of search and rescue aircraft from CAP, DHS and DoD to augment State resources will be needed.

Task: Provide safety, security and support to emergency response operations.

Limitations/Challenges:

- Security (public safety and law enforcement) within the affected areas is critical to the safety of first-responders to conduct firefighting, urban search and rescue, and other emergency response operations.
- Emergency responders will need access to resources (e.g., fuel, transportation, food, shelter) to perform operations.
- Supporting emergency responders includes monitoring their health and mental status and collecting injury and/or exposure information.
- To ensure the safety and security of responders, deploy available law enforcement to secure critical infrastructure, provide security at base camps, logistics staging areas, shelters and feeding areas, pharmaceutical stockpiles, JFO, EOCs and other mission critical sites.
- Deploy Federal, EMAC and Oregon National Guard teams to support local law enforcement operations.
- Use FEMA Individual Assistance Technical Assistance Contractors and private security to support shelter security operations.
- Use volunteer organizations such as Citizen Corps and ORVOAD to provide resources and assistance to responders (e.g., feeding and other tasks that would free up responders to focus on primary missions).
- Requires clear direction and leadership over a large force of responders from

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different jurisdictions, agencies and states.

Course of Action: Coordinate resources to support local directed evacuation operations.

Task: Adopt an emergency management structure that manages resource shortages.

Limitations/Challenges:

- Need to prioritize and manage competition for limited resources region wide.
- Unified Coordination Group (UCG) will be implemented to coordinate the State and Federal support to the impacted jurisdictions.
- Need to establish priorities and unity of effort among all levels of the emergency response community.

Task: Provide State Resources and coordinate deployment of Federal resources to conduct waterborne / airborne evacuation including: rotary and fixed wing aircraft, mass transportation assets such as busses, and ocean going and riverine watercraft.

Limitations/Challenges:

- Situational assessment of roadway, aerial, and water conditions to ensure safety of responders and evacuees.
- Evacuation methods selection will require consideration of vehicle ability, population accessibility, and urgency.
- Coordinate support of commercial vehicle evacuation including: busses, charter boats, and commercial aircraft.

Task: Support mandatory and self-evacuations, including meeting logistical needs of evacuees.

- Evacuation may be limited due to non-passable roadways and evacuees with stranded vehicles.
- Fire conflagrations in urban areas force the evacuation of thousands within the first 72 hours.
- Damages across Oregon are widespread; areas they are fleeing to may not have adequate support for influx of evacuees.
- Evacuees will not have supplies or shelter to be self-sufficient, ESF-6 coordination is paramount.

Course of Action: Validate and provide internal and external public messaging.

Task: Deliver coordinated and effective messaging about the disaster to the public and responders in impacted areas.

Limitations/Challenges:

- Warning systems will be seriously impaired by power and phone outages.
- Established Joint Information Centers (JIC) may not be accessible.
- Limited external public messaging systems.
- Many warning systems and methods used locally are not interconnected between neighboring jurisdictions.

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- Mobile or Satellite JICs may need to be established.
- State Public Information Officers (PIOs) will be overwhelmed and unable to handle the massive ESF 15 traffic.

Course of Action: Establish system to support and sustain incident response personnel within the affected area for potential staging and base camp locations.

Task: Confirm locations of base camp sites. Activate base camp support contracts. Activate base camps to support thousands of State, Federal, and other responders (i.e., USAR, firefighters, law enforcement officers, DoD and National Guard, and incident management staff).

Limitations/Challenges:

- Consider combining base camp support for similar State / Federal functions.
- Hotel / motel rooms will be limited due to displaced population.
- Establish alternatives to temporary base camps including: cruise ships, DoD and MARAD vessels, and college dormitories.
- Accessible, flat space will be in high demand as will fresh water and sanitation.
- Safety and security of these locations needs to be addressed to protect responders and survivors.

Objective: Provide Medical Care

Course of Action: Provide Acute Care – Hospital/EMS

Task: Assess safety of surviving hospitals and deliver immediate care to survivors with staff and supplies on hand.

Limitations/Challenges:

- **Hospital functionality** – Based on the scenario, Oregon is expected to have 1-9 hospitals with complete damage, 2-10 with extensive damage, and 10-25 with moderate damage. Every coastal hospital will either be completely or extensively damaged in this scenario. Most facilities in the Willamette Valley and Southern Oregon will suffer complete to moderate damage (HITRAC, September 12, 2011, p.161-168).
- Demand will exceed capabilities; the system is currently taxed under normal conditions.
- Shortages will exist in hospital equipment, including beds and prescription medications affecting patient care.
- For the remaining hospitals to continue operation, they will immediately need water, fuel, pharmaceuticals and personnel.

Task: Deploy available Disaster Medical Assistance Teams / National Disaster Medical System (NDMS) resources, including Incident Response Team and associated equipment caches.

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Limitations/Challenges:

- Standards of care may require modification due to the number of injured and the lack of care providers and supplies. Many of the injured may not receive treatment for more than 72 hours due to isolation.
- On-hand medical supplies, including blood within Oregon, will be exhausted within 48 hours. Re-supply will be constrained by limited roadway access. Immediate rotary wing air replenishment of medical supplies will be required to isolated care locations.

Task: Coordinate with local emergency managers and hospitals to identify location assignments for Oregon Disaster Medical Teams (ODMT), National Disaster Medical Teams (NDMS), Federal Medical Station (FMS), and Medical Reserve Corps (MRC) deployment of volunteers.

Limitations/Challenges:

- Volunteer trained medical responders will be scattered and isolated due to the event.
- Many local EMS personnel will be diverted to fire / rescue.

Task: Provide Healthcare System Liaison communications to and from Regional Coordinators for clarification of issues/status of hospitals, EMS and other components of the regional healthcare system.

Limitations/Challenges:

- Obtain regional SITREPs to include specific information (e.g., employee absentee rates in hospitals);

Course of Action: Establish field treatment sites for triage, care, holding and evacuation.

Task: State deploys disaster medical system resources, including: EMS Field Treatment sites, Oregon Medical Teams, Mobile Field Hospitals, Oregon Medical Reserve Corps, Federal Medical Stations, and DoD field hospitals.

Limitations/Challenges:

- Triage of the injured will be required.
- Standards of care may require modification due to the number of injured and the lack of care providers and supplies.
- Location of field sites must consider trade-off between proximity to casualties and support available such as utilities and transportation access for staff and evacuees. Utility services must be available. Collocation of field sites near functional medical treatment site to augment capability is desirable.
- Many of the injured will require air evacuation to more capable or less crowded facilities.

Course of Action: Execute Patient Evacuation/Movement

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Task: Support deployment of Ambulance Strike Teams and Disaster Medical Support Units. Use contracted ambulance services where available to move patients to field treatment and air evacuation sites.

Limitations/Challenges:

- Effectiveness will be constrained by limited roadway access.
- Ambulances and busses will likely require security escorts to move safely through heavily impacted areas.
- Establishment of ambulance fuel distribution system support is critical.
- Receiving points for evacuated patients must be identified prior to movement.
- Patient tracking systems among health care system components are currently not integrated and could complicate movement between facilities.
- Limited ability to coordinate and control the flow of patients requiring movement.
- Many roads, highways, and bridges will be impassable in the first few days after the earthquake due to damage and debris on the roads, hampering patient movement.

Task: Conduct air evacuation of patients via fixed and rotary wing aircraft.

- Request NDMS patient movement support system be activated to support moving patients to non-impacted medical facilities in unaffected areas and out of State.
- Will allow for a greater quality of care outside of the impacted areas.

Limitations/Challenges:

- Requires specially configured aircraft.
- Rotary wing aircraft will be low-density, high demand resource.

Task: Conduct waterborne evacuation.

- Coordinate use of specialized DoD vessels to conduct waterborne evacuation.
- Can move large numbers of patients from impacted areas. Vessels can provide access to isolated areas that are not open to ground traffic.
- Contract commercial craft to evacuate non critical care patients.

Limitations/Challenges:

- Most commercial vessels such as ferries and harbor cruise ships are not configured for patient movement. Piers and landings may not be accessible.
- Much of the Oregon Coast lacks deep harbors capable of handling large vessels.

Course of Action: Provide Chronic Care – Medical Special Needs, Mental Health Task: Provide for large numbers of chronically ill survivors without access to pharmaceuticals or facilities that keep them healthy. Limitations/Challenges: - Initially, 40% of Medical Special Needs (MSN) patients will require assistance immediately with an additional 40% requiring care within 72 hours and the remaining 20% of the population requiring care within the first week. - Increased burdens on an already taxed medical system would result as “healthy” chronically ill survivor health deteriorates due to lack of treatment. - Local jurisdictions will require significant amount of State and Federal resources to care for the large numbers of survivors with special medical needs. - Requests for Strategic National Stockpile (SNS) assistance will be needed quickly post-event. - Coordination with locations/facilities out of the impacted areas or out of the State will be necessary for supplies or evacuation of chronically ill.
Course of Action: Maintain safety of water, vector control, food and water quality inspection, and sanitation to protect public health. Limitations/Challenges: - Due to the extent and scale of the disaster, including isolation of communities, it is unclear if local health departments, supported by mutual aid and the Oregon Health Authority (OHA) and the Oregon Department of Agriculture (ODA) have sufficient resources to initiate evaluation and response. - Veterinary care capacity is inadequate; vector monitoring and public health support staff will exist but may be tasked with other missions. - Dead livestock will need disposed of and surviving livestock unable to be cared for onsite will need to be moved or euthanized. - State will coordinate provision of assistance to potable water/wastewater temporary measures and system repair with private companies and city/regional government public works.
Course of Action: Provide medical treatment at shelters Task: State deploys Medical Reserve Corps and available medical assistance staff to established shelters. Will require resource coordination with ESF-6 and ESF-7 to determine location of shelters and allocation of resources.

Objective: Establish lines of supply and transportation

Course of Action: Establish regional priority land routes for responder transportation.

Task: Coordinate with locals and State ESF-1 agencies on designation of priority road and rail routes based on: initial assessments of roads, bridges, and railways, location of National Logistic Staging Areas and routes for incoming resources.

Limitations/Challenges:

- Establish most efficient means of moving resources into the affected area. Establish control over routes to ensure priorities are addressed. Oregon Department of Transportation's initial assessments may take 72 hours or more.
- Critical routes may require temporary modification of roadbed alignments onto adjacent land in order to navigate around debris and obstacles.
- Equipment, personnel and material necessary to re-establish roadways are in isolated areas throughout the State.

Task: Deploy ODOT and other roadway/bridge assessment teams.

Limitations/Challenges:

- Challenges for supporting teams with lodging, fuel, and maintenance of equipment.
- Insufficient aircraft available to do aerial assessments or insert teams into affected areas.

Task: Establish transportation priorities for open routes.

Limitations/Challenges:

- Clearance of existing traffic may delay use for responders.
- Structural damage may limit use of major routes into most heavily impacted areas.
- Multiple critical operations will all require the use of limited roadways.
- Stability of roadways may limit the type of vehicles able to respond.

Course of Action: Clear debris from priority routes.

Task: Oregon Department of Transportation initiates highway debris removal operations using in-region maintenance resources, onsite contractors, and other available contractors.

Limitations/Challenges:

- An unknown but assumed immense amount of debris will be generated from damaged buildings and landslides.
- FHWA, USACE, and DoD can access out of region resources and contractors. Out of region resources may take up to a week to arrive.
- Many landfills will not be able to handle the amount of debris, and debris removal efforts will require an additional amount of capacity from other

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locations.

- Multiple programs and personnel are available at various local, State and Federal agencies, as well as from volunteer organizations, for the removal of debris from roadway facilities following earthquake event. Coordination of this effort will require increased coordination.

Task: Coordinate Federal assistance to ensure State priorities are met. Federal assistance could come from U.S. Army corps of Engineers (USACE) Planning and Response Teams (PRT's), USACE contractors to conduct removal, staging, reduction, and transport to disposal sites, DoD heavy equipment assets e.g., U.S. Naval Construction Force Units.

Limitations/Challenges:

- Team deployment limited by damage to infrastructure.
- Density in urban areas may limit staging / reduction sites.
- Removal / disposal of automobiles will require special handling.

Course of Action: Establish air transport system.

Task: Establish priorities for use of aerial assets such as: movement of first responders, critical supplies, extraction of injured and situational awareness.

Limitations/Challenges:

- Airports, working with the Federal Aviation Administration (FAA), initially divert incoming air traffic and hold planes on ground until damage to critical operational equipment can be assessed. Crews immediately attempt to assess damage. Most experience power disruptions and have to shift to emergency power generators for critical equipment and operations.
- Rotary and fixed wing aircraft currently in State can be put to work immediately if airfields can safely meet the need.
- Aircraft, particularly rotary, will be a low density/high need asset in the early hours of this event. Priority of use will initially support immediate lifesaving operations.
- Fueling, maintenance, lodging for crews can be done outside heavily impacted areas.
- Coordination with private aircraft will need to be established.

Task: Establish control of airspace through: coordination with Federal Aviation Administration (FAA). Implementation of U.S. Air Force / Oregon Air National Guard Air Space Control Plan for control of military aircraft.

Limitations/Challenges:

- Transport into and out of heavily impacted areas is initially limited to rotary aircraft.
- Limited capacity of rotary wing aircraft limits their utility for movement of fire, rescue, and medical teams and equipment.
- Use of alternative sites for landing in damaged areas creates safety issues.
- Limiting non-mission essential aircraft in operational areas (news helicopters).

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Task: Establish loading / unloading, refueling, and maintenance points for inbound rotary wing aircraft at Oregon Air National Guard bases and municipal, regional airports in the State.

Limitations/Challenges:

- Damage to navigation systems and runways at airports in Western Oregon may limit use until inspection and temporary repairs are made.
- Smaller airfields lack capability for offloading aircraft and have limited fueling and repair capacity.
- Many smaller airfields don't have control towers.

Task: Designate heliports; in heavily impacted areas to include pickup points for aerial transport of injured, sites capable of offloading supplies, and locations capable of safe landings/take off.

Limitations/Challenges:

- Will require coordination with local jurisdictions and all ESFs to ensure needs are met.
- Sites capable of being a helispot may be located away from established need (hospital, shelters, etc.). Assessment of viable heliports in impacted areas needs to take into account transportation to/from helispot.

Task: Coordinate with DoD rotary wing assets and U.S. Navy multi-helispot vessels to provide additional capacity for landing, fueling, and maintenance.

Limitations/Challenges:

- DoD assets unlikely to arrive until at least 72 hours into the event.

Task: Coordinate with FAA to establish assessment and use of Portland International Airport.

Limitations/Challenges:

- Identify priorities (e.g., movement of supplies in, movement of visitors and evacuees out).
- Coordinate and assist if possible FAA assessment of condition and capabilities of airports, and FAA determination of traffic flow at each airport.
- Air traffic control staff likely to be limited in number initially.

Course of Action: Establish water transport system

Task: Port owners will conduct initial assessment of their facilities. Priority establishment of ports on coast will be (from south to north, no priority) Coos Bay, Newport and Astoria due to their ability to handle larger vessels.

Limitations/Challenges:

- The ports are not in a heavy shake area and sustain limited damage. USCG conducts inspections of the ports and channel surveys while ODOT and

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contractors conduct inspections of port bridges and roadways. The ports can resume operations once they verify shipping safety. However, port operations have a heavy reliance on the power infrastructure, roads and railroads to transport offloaded goods to their destinations.

- Water transportation provides alternative of bringing significant quantities of supplies and evacuation of coastal areas if bridges and major routes are damaged.
- Tsunami damages to ports likely to be significant. Debris, damaged channels and “sloshing” generated by tsunami will slow re-establishment of ports.
- Condition of piers and wharves may limit use of facilities.
- Shallow depths limit use of large vessels in certain impacted areas.

Task: Coordinate response of DoD and other responding vessels facilitate evacuations, and transport first responders and supplies into impacted areas.

Limitations/Challenges:

- Puget Sound MARAD vessels can be deployed within 72 hours, but will likely be used in Washington State. U.S. Navy Vessels from San Diego can be deployed within 72 hours. MARAD and US Navy vessels can be used for power generation, production of potable water, medical treatment, transfer of fuel and housing for responders and or shelters for affected populations.
- Depending on global deployment, required vessels may be delayed.
- Coordinate local and state resources to utilize support from U.S. Navy assets such as amphibious assault vessels from San Diego if port facilities are too badly damaged.

Course of Action: Establish bulk fuel supply system.

Task: Implement Oregon Petroleum Contingency Plan to redirect in-state fuel supplies to first response activities.

Task: Assess condition of regional bulk fuel storage and distribution infrastructure.

Task: Coordinate with Private sector suppliers to activate national contracts with bulk fuel suppliers.

Task: Obtain waivers: environmental regulations (e.g., fuel production and use), transportation regulations (e.g., driver hours and weight limits) to allow for fuel deliveries to be expedited.

Course of Action: Establish fuel distribution network for response operations.

Task: In coordination with local governments and FEMA, establish priorities for fuel distribution such as: police, fire, and other first responders, hospitals, emergency care, emergency transport, ambulances, emergency operations centers, shelters, and generators for other critical facilities.

Limitations/Challenges:

- Hospitals have limited (24 hours) supply of generator fuel onsite. Fuel supply needs for emergency vehicles, EOC's, shelters, hospitals, and air/fuel requirements will all make demands on limited fuel stocks.
- Inability to deliver fuel to many areas of the state due to damaged infrastructure.

Task: Establish temporary sites for points of fuel distribution.

Limitations/Challenges:

- Transportation and State storage limited by damage to infrastructure. Distribution at retail outlets, local government facilities limited by power outages (pumps) and damage to facilities.

Tasks: Route delivery trucks directly where infrastructure conditions permit to essential sites with generators (e.g., hospitals, water and wastewater treatment facilities and pumping stations, fire and police stations, public works facilities, utility companies (e.g., power, natural gas), EOC's, and shelters. Many hospitals and local government agencies have in-ground and above ground fuel storage capacity.

Limitations/Challenges:

- Supply estimates of generated facilities will need to be known.
- Some locations have propane powered generators.

Task: Given damage to aviation fuel distribution network, direct aircraft to refuel outside the impacted areas.

Limitations/Challenges:

- Refueling outside the impacted areas will affect the re-routing of flight patterns.
- While unlikely, there could potentially be zero fueling locations west of the Cascades, with all aircraft refuel heading to Roberts Field in Redmond, or Kingsley Field in Klamath Falls. Air control and capacity to support that amount of aircraft is questionable.

Task: Secure fuel distribution sites.

6.3.2 COA for the Objectives during the Sustained Response Phase

E+72 hours to E+14 days

Objective: Coordinate the flow of out of State materials, supplies and personnel.

Course of Action: Establish Lines of Supply and Transport.

Task: Identify surviving airfields west of the Cascades to serve as State Staging Areas. The FEMA Operations Sections in coordination with the State establishes Staging Areas to support local incident response at federal installations, airports and other mission capable facilities within the incident area for onward integration of teams and resources to support local response.

Limitations/Challenges:

- Using pre-established recommended State staging areas, quickly assess and make usable staging areas to receive Personnel and materials from Incident Support Base (see Mass Commodities Annex of the State of Oregon EOP for further mass commodities distribution information).
 - Incident Support Base (ISB) likely to be at the USFS Redmond Air Center due to:
 - Located outside of impacted area
 - Federally owned facility
 - Warehousing areas and unloading/loading equipment
 - Ability to house responders
 - State Staging Areas would be set up at operational Western Oregon airports as described in the Mass Commodities Annex of the State of Oregon EOP.
 - Rapid assessment of Western Oregon airports and airfields' ability to handle relief supplies is paramount.
 - Likely that air traffic control capacity would need to be brought from outside the State.

Task: Coordinate and prioritize Federal relief supplies and personnel being brought into the State.

Limitations/Challenges:

- Provide State Liaison(s) to ISB to coordinate State needs.
- Communication difficulties with impacted areas will limit effectiveness of delivery of relief.

Task: Coordination/communication with impacted areas on locations for distribution of supplies to survivors.

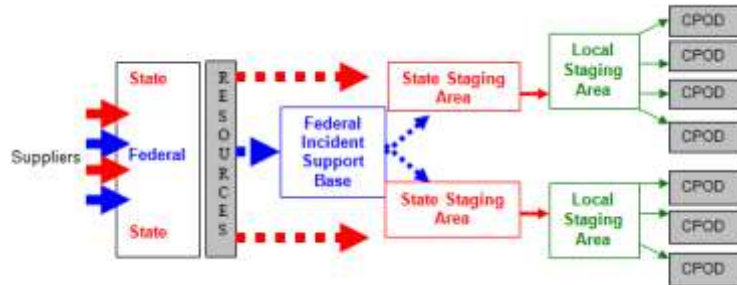
Oregon Counties are in the process of identifying Community Points of Distribution (C-POD) in their communities.

Limitations/Challenges:

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- The State ECC will be aware of some of these locations; the severity of this incident will likely impact identified C-PODs, and others will need to be identified rapidly to support pockets of isolated survivors.

Fig 7.2.5-1 Resource Distribution Operations:



Task: Begin flow of external resources and personnel into impacted areas.

Strategic airlift resources arrive at ISB and/or staging areas and are off-loaded to local and federalized ground and air transport, including USCG, CBP, and DoD rotary aircraft. The State and Federal Branch Directors coordinate with local EOCs to provide additional ground transportation for resources, commodities and teams to sustain operations.

Survivors are supported by establishing a network distribution (Figure 7.2.5-1). Staging Areas support hospitals, shelters, survivor gathering points, open spaces, and C-PODs as determined by the State and local emergency managers and facilitated by State and Federal Branches.

Limitations/Challenges:

- USACE C-POD guidance is written with the assumption that C-PODs would serve survivors in vehicles able to drive to the C-POD. It is likely that a much greater number of C-PODs than currently identified would be needed to serve survivors who are isolated and immobile due to damaged roads and bridges.

Course of Action: Coordinate receiving and distribution of relief supplies and water/food distribution done by NGOs, volunteer groups and the private sector.

Task: Coordination with ESF-6 organizations in the State ECC (Red Cross, ORVOAD) to maximize the amount and targeted help available to survivors.

Coordination will also be occurring on the Federal level with representatives of these groups at the NRCC.

Task: Coordinate and enable local communities and the State to manage private donations of materials, food and personnel from private companies.

Limitations/Challenges:

- To manage the influx of donations and volunteers, State and local staff will need

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to be directed to coordinate the location and distribution of these items.

- Volunteers will need managed to direct their work and screened for ability and security.
- ESF-15 needs to deliver concise public messaging on what donations are most needed.
- ESF -6 will coordinate donations and prioritize the efforts of volunteer agencies. The efforts of volunteer agencies are coordinated through ECC cooperation with Oregon Volunteer Organizations Active in Disaster (ORVOAD).

Objective: Provide care and shelter for displaced population.

Course of Action: Support opening of identified local American Red Cross and Non-Governmental (NGO) operated shelters.

Task: Coordinate and Mobilize shelter supplies and mobilize trained shelter staff.

Limitations/Challenges:

- Local sheltering may be limited due to damage to facilities and lack of available personnel.
- Local sheltering effort will vary. Most may not be sustainable for more than 3 days.
- Large numbers of people will stay in tents or other make-shift shelters on their own property or in open space and will need to be supported by food, water, and sanitation.
- Spontaneous shelters will begin to open hours after the incident and will likely not be properly supported for several days following the incident.
- Survivors may be unwilling to leave unsafe homes/spontaneous shelters.
- There will be a need to resource or consolidate ad-hoc shelters post-incident.
- Special needs supplies will be in short supply and the ability to care for these individuals will put a burden on shelters in the initial response.
- Security concerns may necessitate a gradual closing of mega-shelters.
- Transitional Sheltering Assistance may be required in or near impacted communities.
 - Mass care operations will also require:
 - Potable Water
 - Sanitation Disposal
 - Security
 - Mental Health care and psychological first aid
 - Functional Needs access considerations

Task: Deploy State inspection teams to assess structural integrity of shelters, also utilize available FEMA, FEMA contractors, and USACE personnel.

Task: Coordinate with ESF-1 and ESF-7 to begin movement of supplies, generators, fuel, and communication equipment to identified and safe shelters.

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Limitations/Challenges:

Base camps are required to support shelter staff. If space permits, ARC staff and other shelter support staff may sleep at shelter sites prior to the establishment of the base camps.

Task: Provide public information on location and activation of shelters.

Limitations/Challenges:

Lack of power and communications limiting the spread of information.

Task: Provide security staff to shelters. Support mega-shelters if available to shelter evacuees and tourists.

Limitations/Challenges:

- Security staff and the ability to care for special needs will be required at designated shelters and mobile kitchens.

Course of Action: Establish alternative shelter locations.

Task: Consider use of the following as shelter facilities: hotels / motels outside the impacted area, cruise ships, DoD vessels that can be leased and docked near impacted areas, partially vacant government facilities, college dormitories, sports facilities, arenas, and convention facilities.

Limitations/Challenges:

- Ships require security and present problems with regard to access for people with disabilities.
- Hotels, motels and dorms may be damaged or occupied. It will be a challenge to identify vacant areas to house survivors.
- Vacant government facilities may not be in good repair or have utilities to support residence.

Tasks: Locate, identify and support survivors who are isolated or in improvised shelters.

Limitations/Challenges:

- Survivors may be in isolated pockets requiring various forms of support.
- It will be difficult to locate and assess the needs of small isolated populations.

Course of Action: Transport displaced individuals to counties with excess shelter capacity.

Due to the widespread nature of this event, it may be difficult to support evacuees in other parts of Oregon. Host communities or host state protocols may need to be initiated.

Task: Deploy busses and other mass transit to move displaced individuals.

Limitations/Challenges

- Transportation systems may be damaged or under repair.
- Lack of fuel and capable vehicles.

Task: Support utilization of aircraft or waterborne systems for evacuee movement.

Limitations/Challenges

- Docking facilities/airports must be repaired or temporary landings constructed.
- Arrangements must be made for transportation to and from docking facilities or airports and sheltering sites or eventual destinations.
- Aircraft unable to move mass amounts of people, multiple flights needed.

Task: Support State and local evacuation of detention centers and jails and transfer of detainees and inmates to facilities in unaffected areas / counties.

Limitations/Challenges

- Transportation mechanisms must accommodate special needs populations.
- Additional security will be required for the movement of detainees.
- Undamaged correctional facilities may be located well outside of the impacted areas - in Eastern Oregon.

Course of Action: Coordinate with ARC, ORVOAD and other NGO's to initiate mass feeding operations.

Task: Mobilize resources and supplies to respond in the post-earthquake environment.

Task: Validate resource shortfalls and obtain necessary resources.

Task: Provide continued assistance in obtaining supplies, equipment, food, water and transportation to support the sheltered population.

Limitations/Challenges

- MREs will be the food commodity available in the shelters and most likely will not be available during the first 72 hours after an event. ESF-6 will coordinate with ESF-11 and ESF-7 to provide MREs and other rapidly deployed and easily prepared food items to authorized shelters.
- ESF-6 and ESF-11 will determine the quantity of MREs needed and type best suited for response operations and coordinate with ESF-7 for the procurement

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of the product. ESF-6 will coordinate in the development of plans to transition from MREs to other food commodities.

- The ARC, ORVOAD members, and other supporting organizations will conduct food preparation and serving operations. These volunteer organizations will have mobile feeding units in the disaster areas once safe transportation routes are identified. Coordination and assistance with ESF-1 and ESF-7 will be necessary.

Task: Activate ARC and other NGO's mobile feeding units and establish feeding sites.

Limitations/Challenges

Thousands will need feeding from distribution locations and or shelters until utility service and retail food distribution is restored.

Task: Provide mobile feeding resources (DOC, ODF, etc.)

Task: Conduct special needs assessment to include the elderly, children and those with chronic illness populations in impacted areas.

Task: Engage grocery chains and other retailers to expedite reopening / re-supply of stores in impacted areas.

Limitations/Challenges

- Damage to retail and distribution facilities, transportation infrastructure, and utilities will affect the ability of retailers to reestablish operations.
- The re-establishment of local commerce has proven to be the catalyst of recovery in other large disasters in the United States. Oregon should make sure to streamline the private sector's attempts to provide relief within the parameters of non-disaster related laws and regulations.

Course of Action: Provide transportation, equipment, and services to support special needs populations.

Task: Deploy durable specialized equipment and prescription medications to designated shelters.

Limitations/Challenges

- Damage to transportation infrastructure will limit distribution.
- It's unlikely that survivors will have medicines and necessary supplies they require.
- Initially, 40% of Medical Special Needs (MSN) patients will require assistance immediately with an additional 40% requiring care within 72 hours and the remaining 20% of the population requiring care within the first week.
- Local jurisdictions will require significant amount of State and Federal resources to care for the large numbers of survivors with special medical needs.
- Response operations will be committed to ensuring the needs of all populations, to include individuals with access, functional and other special support needs are met to the degree possible within general population shelters.

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Task: Support State functional assessment of people with disabilities and elderly as they arrive at shelters. Establish transportation fleet of vehicles for special needs population.

- Track status of Special Medical Needs Shelters.

Task: Where possible, evacuate special needs populations out of impacted areas where they can be cared for more effectively.

Task: Prepare and deploy translators with responders and to shelters to assist with non-English speakers.

Course of Action: Provide resources for sheltering and rescue of animals.

Task: Provide support for transportation for animals, animal shelters, and distribution of supplies to residents with animals, and animal search and rescue. Resources include: NGO's, voluntary organizations (Oregon Veterinary Medical Association), Veterinary Assistance Teams, USDA Animal Care Response Teams, PHS, and National Veterinary Response Teams.

Limitations/Challenges

- State and federal ESF- 6, 7, 8, and 11 will support local operations with resources and services at shelters, PODs, and areas where people will congregate, as well as provide support to evacuees.
- Although no estimate exists, a large percentage of the displaced population is expected to have pets.
- Local nongovernmental resources for animal care will be overwhelmed by requirements for sheltering thousands of animals, including companion animals that accompany evacuees who are seeking shelter, as well as animals that are abandoned and require rescue.
- Companion animals will require shelter services, ideally close to their owners.
- Collocated but separate animal shelters and general population shelters are desired.
- Thousands of animals may be abandoned or separated from owners.
- Mustering of animal welfare volunteers will be a challenge with poor infrastructure.
- Overflow veterinary facilities will have to be identified in other counties not impacted and possibly other states.
- Emergency transportation is likely to not transport animals.
- NGO's, the private sector and volunteer organizations have significant local, regional, and national resources for care, shelter, and transportation of animals.

Task: Support provision of supplies and transportation to support livestock and dairy operations.

Limitations/Challenges

- Temporary corrals, pasture and shelters may need established.
- Contact with veterinarians for disease control could be challenging.

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- Damaged feedlot waste storage and locating temporary animal sheltering areas need to take into account runoff to waterways.
- To restore agricultural commerce, coordination with major producers and farmers needs to occur to identify roadways needing re-established.

Course of Action: Distribute food, water, and other commodities to C-PODs and staging areas.

Task: Coordinate with local emergency managers and FEMA to identify appropriate locations for C-PODs.

Limitations/Challenges

- C-POD locations need to accommodate isolated pockets of survivors.
- Due to roadway damage, C-POD locations need to be accessible by foot for survivors, especially in urban areas. This adds to the burden of distribution from State and local staging areas.
- Consideration to public sector business re-establishment should be considered when looking to cease or move C-POD operations.

Task: Coordinate with local emergency managers and FEMA to determine staffing and equipment requirements.

Limitations/Challenges

- Security of C-POD sites will be a concern.
- ESF-15 will work with locals to communicate locations of C-PODs to survivors.

Task: Deploy Federal assets as needed to POD locations where State and local resources are not sufficient.

Task: Distribute food, water, personal care, and basic medical supplies to C-PODs.

Limitations/Challenges

- Distribution is dependent upon transportation and access to the impacted areas, as well as the assessment of the pre-determined C-POD sites.

Objective: Re-establish medical system

Course of Action: Evacuate hospitals and long-term facilities that lack supporting systems.

Task: Support State assessments of hospitals and long term care facilities.

Limitations/Challenges

- Evacuees will require a bed in another hospital prior to movement. With most of western Oregon experiencing damage, high casualties, and supply shortages, it will be difficult to find locations for care.

Task: Use busses and other available mass transit to evacuate non-critical care patients from long-term facilities.

- To support patient movement and evacuation for the impacted areas, ESF-8 will assign the highest priority to life saving activities; patient movement and evacuation is a lifesaving activity.
- State and Federal resources will be activated to support patient movement and evacuation.
- Patients will remain within Oregon if possible, and ESF-8 will deploy resources necessary for patient evaluation and stabilization at identified airports.
- Emphasis is placed on the movement or evacuation of people with severe medical needs.
- Look for aeromedical evacuation capability to accomplish mission if available.

Task: Provide contract ambulance services for non-ambulatory residents.

Limitations/Challenges

- Ambulance requirements will exceed resources.
- Many roads will not be usable for a long time.
- Travel times would be long due to blocked roadways. Challenging road conditions will make movement of non-ambulatory patients difficult and could cause further deterioration of their condition.
- Look for aeromedical evacuation capability to accomplish mission if available.

Task: Complete support for transfer of patients out of the area.

Limitations/Challenges

- Damage to transportation system will limit access to facilities.
- Lack of available hospital beds and resources in Western Oregon.

Course of Action: Reestablish operations at hospitals and clinics.

Task: Deploy NDMS, PHS, DoD medical assets to: Support the transition of EMS field treatment sites to fixed or temporary medical care facilities that are more capable of extended operations. Support the establishment and operation of authorized alternate care sites.

Limitations/Challenges

- 80 percent of medical system is privately owned and will rely primarily on insurance for reconstruction.
- Short term, private/public partnerships and innovative mechanisms to provide Federal assistance will be required to restore privately owned and operated portions of the health care system.
- Standards of care may require continued modification.
- Complex procedures and care systems will take longer to restore.

Task: Supplement assessment of damaged hospitals and long-term care facilities with Federal inspection teams.

Limitations/Challenges

- Utility services will need to be available for restoration of hospitals.
- Out of area medical facilities are likely to experience service overcrowding.
- Facilities will require the replenishment of prescription drugs and other hospital supplies.

Task: Continued Public Health information to survivors.

Limitations/Challenges

- The public will require guidance concerning how best to avoid health hazards created by or arising from conditions existing in the affected area during the recovery phase.

Course of Action: Deploy additional pharmaceutical supplies.

Task: Seek deployment of available U.S. Department of Veterans Affairs pharmaceutical caches.

Limitations/Challenges

- Damaged and impassible roadways limit distribution of pharmaceutical supplies.

Task: Seek deployment of Strategic National Stockpile of pharmaceutical supplies.

Limitations/Challenges

- Damaged and impassible roadways limit distribution of pharmaceutical supplies.
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Task: Support establishment and operations of State Receiving, Staging, and Storage site for pharmaceutical supplies.

Limitations/Challenges

- Damaged and impassible roadways limit distribution of pharmaceutical supplies.
- State resources will need to be supplemented by Federal assets. Resources will begin arriving within 72 hours.
- ESF-8 leads medical logistics activities with support from ESF-7.

Tasks: Acquire and distribute vendor managed medical supplies. Stabilize distribution of medical supplies.

Limitations/Challenges

- Damaged and impassible roadways limit distribution of pharmaceutical supplies.

Objective: Reduce hazards to the population

Course of Action: Deploy hazardous incident response teams

Tasks: Deploy U.S. Environmental Protection Agency (U.S. EPA) hazardous materials teams and Oregon OSFM and DEQ response teams. Detect, identify, contain, decontaminate, resolve, dispose of, or minimize discharges of oil or releases of hazardous materials.

Limitations/Challenges

- Many counties and local governments have limited or no hazardous material response teams within their jurisdictions.
- Evacuating areas may not be possible due to roadway damage.
- Limited ability to identify, assess and contain oil and HAZMAT releases due to loss of communications systems, limited transportation access, and insufficient numbers of trained responders.
- Limited ability to provide health and safety guidance to responders and the public based on the loss of communications systems.
- Ability to provide safety and public information about a dangerous HAZMAT spill will be degraded.
- Fire, USAR, HAZMAT and EMS services have competing requirements during the response and may not be available.
- Exposure, disease vectors, and chemicals in debris will threaten displaced survivors.
- Sewage spills and lack of fresh water will cause immediate health risks to public and first responders.

Task: Prioritize public messaging for survivors who may be in danger from HAZMAT.

Task: Debris removal teams and damage assessment teams will coordinate and relay information to ESF-10 to identify materials that are considered hazardous waste.

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Course of Action: Alleviate public health hazards and respond to public health emergencies.

Task: Support restoration of State health hazard detection capabilities through reestablishing State laboratory capabilities.

Task: Transporting samples to other locations in Oregon and nationally (e.g., DoD CDC), and private services.

Task: Support State assessments of drinking water safety: deploy Federal resources for support, including PHS commissioned Corps, CDC, U.S. EPA teams, and DoD sanitary officers.

Task: Provide public assurance that medical supplies and pharmaceuticals are available:

- Monitor blood supply inventories to assure continued availability.
- Expand medical care capacity throughout the State as needed, if possible.
- Activations and coordination of alternate medical care facilities to replace damaged ones.
- Continued communication and updated health considerations with the public through the Joint Information Center in coordination with other Public Information Officers.
- Participation in EMAC, through the State ECC, for medical and health services as needed.
- Ensure that medical facilities within the damaged areas continue to remain safe from secondary effects of the earthquake (i.e., aftershocks, contaminating materials, hazardous materials, fire, flooding, etc.).

Task: Initiate steps to prevent communicable disease outbreaks amongst the surviving population. Conduct surveillance at field treatment sites, government authorized alternate care sites, hospitals, and other health care facilities. Deploy MRC, Federal epidemiologists (CDC and PHS). Deploy CDC, PHS, DoD and Federal medical teams to assist with immunizations.

Task: Initiate efforts to protect population from airborne hazardous materials and radiological hazards; Deploy available State resources for monitoring air and water quality.

Task: Support State efforts to ensure the safety of the food system: Food safety officers from PHS, and other Federal Agencies, Food Safety Inspection Service and Food and Drug Administration response teams.

Limitations/Challenges

- PHS resources are drawn from a nationwide pool. Tier 1 resources travel within 12 hours; tier 2-3 within 72 hours. Number of shelters with more than 1200 (pre-identified) and spontaneous shelters will require prioritization of the sharing of resources. Challenges for supporting porting teams with lodging,

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transportation, fuel, and supplies will require prioritization. Team movement will be limited by damage to infrastructure.

Task: Continue monitoring and prioritize repairs of facilities to alleviate environmental health conditions within the damaged areas and mass shelters.

- Sewage
- Contaminated food or water
- Infected refuse
- Vector control
- Dead animals (in support of ESF -11)

Course of Action: Assess safety of buildings and other structures.

Task: Conduct inspections for safety purposes. Prioritize State inspections of hospitals, long-term care facilities, shelters and other critical facility inspection efforts. Deploy other Federal Agencies with technical capabilities (e.g., USACE). Deploy FEMA Public Assistance Program Technical Assistance Contractor resourcesLimitations:

Federal Agency and contractor support will be drawn from a nationwide pool of resources. Resources will begin arriving within 72 hours. Support for SAP may be limited by requirement for in-State certifications. Challenges for supporting teams with lodging, transportation, and fuel will need to be prioritized. Team movement will be limited by damage to infrastructure.

Task: Secure and/or demolish structures that pose threats to public health and safety.

Tasks: Provide direct Federal assistance to severely affected jurisdictions. Secure structures that do not pose an immediate risk of collapse. Demolish structures that may collapse in current condition or due to aftershocks.

Limitations:

Structures that do not pose an immediate risk of collapse can be secured, allowing reallocation of demolition resources. Local governments must determine that a threat exists, provide right of entry hold harmless agreements. Hazardous construction materials must be handled appropriately. FEMA must establish a process to ensure compliance with the National Historic Preservation Act.

Course of Action: Assess, remove, stage, and dispose of debris that poses hazardous conditions.

Task: Coordinate and prioritize Federal assistance and contractors to conduct removal, staging, reduction, and transport to disposal sites.

Task: Deploy heavy equipment assets and fuel to hasten roadway clearance and debris removal.

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Task: Deploy Oregon OSHA, U.S. EPA and Occupational Health and Safety Administration resources to monitor safety and health.

Limitations/Challenges

- USACE, DoD, U.S. EPA, and FEMA Public Assistance Program can access out of State resources and contractors. These resources may take up to a week to arrive. Challenges for supporting teams with lodging, fuel, and maintenance of equipment. Team movement will be limited by damage to infrastructure. Density in urban areas may limit staging, reduction sites, as well as disposal capacity.

Task: Removal of debris that hinders immediate lifesaving actions or poses an immediate threat to public health and safety.

Task: Removal and disposal of debris that hinders the orderly recovery of the community and poses less immediate threats to health and safety.

Objective: Conduct mass fatality operations

Course of Action: Support collection and transportation of remains (fatalities)

*See SA-H of the Oregon Emergency Operations Plan for detailed Mass Fatalities information.

- Stabilization and emergency medical treatment of living victims take precedence over other operations.
- If mass fatalities exceed the abilities and supplies of local jurisdictions, the MEO is the lead agency, with OHA in a support role.
- Private mortuaries are responsible for bodies once a death certificate is signed.
- Requests for resources for aid with mass fatalities will come through the ESF-8 Agency Operations Center (AOC).

Clear channels of communications will be established from county EOC to the State Emergency Coordination Center (ECC) in Salem. The ESF-8 ECC Liaison will operate from the ECC and be the conduit for the flow of information from the County EOC to the MEO and the ESF-8 AOC.

First responders will determine that deaths have occurred, and will contact the county's MEO immediately. The local MEO will contact the local EOC if it is determined that local resources are inadequate for the response. The State MEO will provide resources as available. If the State MEO cannot provide all the needed resources, it will contact the ECC and request additional resources from outside the State.

Task: Local governments initiate mass fatality operations, including scene evaluation, organization, and initial search for recovery of remains.

Limitations/Challenges

- Local Medical Examiner resources will be overwhelmed.

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- The planning for mass fatalities falls under Emergency Support Function (ESF) 8 – Public Health and Medical Services, and thus is the responsibility of Oregon Health Authority (OHA). However, the State Medical Examiner’s Office (MEO) is responsible for managing mass fatalities, providing expertise, staff, and resources not available or depleted at the local level, as set forth in Oregon Revised Statute (ORS) 401.
- The state MEO is responsible for investigating unattended (without a medical professional to certify death), sudden and unexplained deaths, and deaths from criminal activity. In a mass fatality incident, deaths due to this scenario would overwhelm the MEO and would probably not require investigations (the cause of death and identification would be known for most cases). Alternatives to the investigation of each of these deaths will need to be undertaken.

Task: State Coroners Mutual Aid System will be activated to mobilize out of State resources to support local operations.

Limitations/Challenges

- Access to remains will be limited by damage to transportation system.

Task: Local governments will establish Fatality Staging Areas as temporary holding points until remains can be transported to morgues.

Limitations/Challenges

- State may assist with identification of properties that can be used as Fatality Staging Areas.

Course of Action: Establish morgue and storage sites.

Tasks: Establish sites for local mortuary operations, including: Morgue sites for processing. Storage facilities to support morgue operations. Deploy refrigerated trucks to support storage operations. Deploy security personnel to morgue facilities and storage facilities.

Limitations/Challenges

- Movement of deceased will compete with patient evacuation.
- County morgue facilities will be damaged or unable to handle the number of fatalities.
- Sites may be limited due to damage to potential facilities.
- Surviving and available refrigerated areas may be being used for food storage and unavailable for remains.
- Utility or power generation services must be available.
- The State and FEMA may assist with evaluation of available State and Federal properties.

Course of Action: Deploy and coordinate Federal teams to support mortuary operations.

Tasks: Federal resources include: Disaster Mortuary Operations Response Teams (DMORT’s). DoD Mortuary Assistance Teams, which can support recovery and

6. Plan Execution

transportation of remains. Disaster Portable Morgue Units.

Limitations/Challenges

- County coroner and sheriff-coroner medical examiner maintains control of operations.
- Operations include storage, decedent identification, accounting for personal effects, notification of next of kin, and coordination of final disposition.
- DMORT's may begin to arrive 24 to 48 hours after the incident.
- Support for food, shelter, transportation, and physical facilities to conduct mortuary operations will be required.

Course of Action: Support establishment of Family Assistance Centers.

Tasks: Local governments identify requirements for, and locations of, Family Assistance Centers. State, Federal (including DMORT Family Assistance Center teams), and NGO's support local government operations.

Limitations/Challenges

- Multiple Family Assistance Centers may be required. Secure locations, staff, and supplies will be required.
- Utility services must be available.
- Coordination with faith-based volunteer groups to provide grief counseling needs to be established.
- Coordinate with jurisdictional and regional partners to provide non-intrusive mental health support services to responders, family members of the deceased, and incident survivors.

Tasks: Joint Information Center implements public information initiative regarding Family Assistance Centers and processes related to missing persons and fatalities.

Course of Action: Deploy resources to implement stress management and crisis intervention strategies.

Task: Deploy personnel qualified in critical incident stress management and crisis intervention strategies to sustain first responders engaged in fatality management operations.

Limitations/Challenges

- Teams will require transportation, shelter, food and water.
- Coordination with faith-based volunteer groups to provide grief counseling needs to be established.

6.3.3 COA for the Objectives during the Relief Phase

E+14 days to E+60 days

Objective: Provide interim housing for displaced population

Course of Action: Develop interim housing alternatives

Task: Convert shelters with appropriate capacity into transitional housing. Establish interim housing on individual sites.

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Task: Establish interim housing through group sites: commercial sites, private sites, sites outside the impacted area. Use readily fabricated dwellings.

Task: Provide temporary accommodations by supporting the leasing of: Hotels and motels, and cruise ships.

Task: Coordinate temporary housing at partially vacant military and government facilities. Provide rental assistance.

Task: Extend income requirements for public housing (U.S. Department of Housing and Urban Development [HUD]), and support tax credits for low-income housing (U.S. Treasury).

Task: Coordinate foreclosed housing use through HUD and U.S. Department of Veteran Affairs.

Limitations/Challenges

- Interim housing solutions must be coordinated with State and local government officials.
- Dense urban areas may not accommodate onsite interim housing.
- Space for group sites is limited, due to lack of relatively suitable land and density of existing development.
- Placement of housing outside of urban areas moves residents away from their homes and places of work and increases demand for transportation and fuel.

Objective: Restore utilities, infrastructure and public services

Course of Action: Conduct initial assessments of public facilities and infrastructure.

Task: Deploy Federal and State teams to evaluate damage and establish priorities: OEM and FEMA Public Assistance Program and Technical Assistance Contractor staff. ODOT and FHWA (roads and bridges), ORWARN, DEQ, U.S. EPA (water and wastewater facilities), and PUC, ODOE, USACE (power, levees, and water control facilities).

Limitations/Challenges

- Federal Agencies and contractor support will be drawn from a nationwide pool of resources.
- Initial assessment for priorities will need to be followed by a more detailed assessment for restoration. Facility owners may not be able to participate in assessments.
- Challenges for supporting teams with lodging, transportation, fuel, food, and water.
- Team movement within the area will be limited by damage to infrastructure.

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Course of Action: Establish emergency repair operations and temporary systems for critical facilities.

Task: Provide generators and fuel for the operation of key systems (e.g., sewage lift stations, treatment plants, water treatment facilities, and pumping stations).

Limitations/Challenges

- 24 hour staffing of facilities and refueling of these generators will need to be accounted for in setting priorities. Many locations won't have the critical personnel to maintain facilities.

Task: Transport large and or specialized repair parts and equipment critical to restoration of utilities.

Task: Provide chemicals to treat water and wastewater.

Task: Provide logistical support for utility repair crews (e.g., base camps, fuel, food, water, and security).

Limitations/Challenges

- Power, gas, and fuel infrastructure is generally privately held.
- Utility repair crews are "Tier 2" in the Oregon Petroleum Contingency Plan, and may not receive fuel needed to sustain infrastructure repairs.
- Challenges in supporting teams with lodging, fuel, maintenance, food, and water.
- Resource movement within the area will be limited by damage to infrastructure.

Task: Provide direct Federal assistance for construction of temporary systems (e.g., use of federal resources to construct above ground water and wastewater lines). Provide funding for emergency repairs and establishment of temporary systems for public utilities and infrastructure.

Limitations/Challenges

- Environmental requirements must be waived or addressed.

Course of Action: Provide temporary facilities for critical public functions (e.g., public safety, security, medical treatment, administration, and schooling.

Task: Re-establish public functions and capability to govern. Move functions back into the area where they are required.

Task: Provide funding for purchase or lease of temporary facilities and emergency repairs.

Task: Coordinate delivery and setup of modular units to serve as temporary facilities.

Task: Provide services for public safety, other public employees: Base camps, or other

temporary lodging and transportation services.

Limitations/Challenges

- Utility services must be available for temporary facilities or must be provided with installation.
- Shipment of modular units may be affected due to infrastructure damage.
- Challenges for supporting facilities with fuel, maintenance of equipment and supplies.
- Environmental, access and safety requirements must be waived or addressed.
- Proper location of facilities will be a challenge due to reductions/influx of population in communities due to evacuations.

Objective: Establish temporary transportation facilities

Course of Action: Establish ocean transportation system to serve coastal communities.

Task: Establish ocean going transportation system while bridges, roads, and air travel systems along coast are out of service.

Task: Repair existing docks and ports or construct temporary or permanent landing sites.

Task: Expand maintenance and fueling capacity and related facilities.

Task: Borrow, lease, or purchase additional vessels to meet tasks of ferrying population or transferring supplies.

Limitations/Challenges

- Identify surviving and functional waterfront facilities.
- Damage to waterfront facilities may require repair before use, priority should be given to ports capable of handling deep draft vessels (Astoria, Newport and Coos Bay).
- Must be coordinated with land based transit.
- Service may be limited to passengers only, prioritized supplies, and or availability to off load vehicles and or supplies.
- Depths may limit the type of vessel and associated transport capabilities.
- Environmental requirements must be waived and or addressed.

Course of Action: Re-establish regional transit routes and systems.

Task: Increase mass transit capabilities to account for damage to automobile infrastructure (e.g., roads, bridges, parking, parking garages). Increase routes, schedules, and capacity.

Task: Lease and purchase of additional equipment, additional personnel, and the temporary reduction of user fees during the recovery period.

Task: Prioritize establishment of routes to medical facilities, re-established private

6. Plan Execution

sector commercial businesses, work sites, and survivor assistance locations.

Limitations/Challenges

- Cost of expanding existing facilities, such as transit stations and maintenance facilities must be addressed.
- Rural locations may be underserved.
- Environmental requirements may be waived and or addressed.

Note: *The Federal Government is authorized to provide transportation resources under Section 419 of the Stafford Act.*

Course of Action: Institute temporary vehicle restrictions on key routes.

Task: Reduce traffic on key routes that are congested as a result of damage, or serve a vital lifeline to impacted communities.

Limitations/Challenges

- Public reaction is likely to be overwhelmingly negative to banning access on some routes.
- Access passes and verification may need issued to residents of rural areas needing to utilize closed roadways.
- Closing roadways will require increased personnel, signage, barriers and law enforcement.

Task: Establish transit service along closed roadways.

Task: Develop and distribute effective public information on road restrictions.

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7

Incident Coordination

This section provides a general discussion of coordination, communication, and oversight with regard to the State of Oregon and Federal response. All activities will be consistent with the Oregon Emergency Operations Plan and corresponding Emergency Support Functions (ESF's), as well as NIMS, and the National Response Framework (NRF).

7.1 Coordination

State and Federal actions in support of field-level response are coordinated through the joint State / Federal organization under the direction of the Unified Coordination Group. The Unified Coordination Group is initially formed at the Oregon Emergency Coordination Center upon arrival of the Federal IMAT and then deploys to the JFO when that facility can function adequately to support response and recovery operations (the move is targeted for E+72 hours). Joint State / Federal operations are organized according to Incident Command principles.

The response to a catastrophic incident within Oregon will require a greater level of interface between the counties / impacted areas and the Unified Coordination Group heading up the joint State / Federal IMAT organization. The Unique coordination and communication requirements will be met by deploying individuals to the impacted areas' emergency operations centers. The IMAT does not replace the existing State-level structure, but rather provides a temporary, specific direct line of communications between the impacted areas / EOC's and the joint State / Federal IMAT Operations Section. The IMAT will serve as the single point of contact for the request and acquisition of supplemental Federal resources for the impacted area.

7.1.1 Coordination with Other State and Federal Agencies

Supporting State agencies, Federal Agencies, NGO's, private-sector organizations, and volunteers may be directly integrated into the joint State / Federal organization or designated as resources through the IAP process for specific assignments. State and Federal mission coordinators, working under the direction of the joint Operations Section Chiefs, provide mission assignments (Federal Agencies) or mission tasks (State Agencies) as required. A liaison officer serves as the Unified Coordination Group's primary point of contact with agencies not directly integrated into the joint State / Federal organization and

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coordinates with agency representatives who have responsibility for monitoring the involvement of these agencies in the operation.

- State and Federal agencies may respond to the earthquake under their own authorities. Once the Unified Coordination Group is established, these activities must be coordinated with the joint State / Federal organization so that they can be accounted for in the IAP process. To the extent possible, sustained operations should be folded into the joint State / Federal response through the mission / tasking assignments process.

7.1.2 Coordination with Local Governments

Oregon's system for managing emergencies and for providing support and resources to local governments is governed by the Oregon EOP and corresponding ESF's, and Annexes. Local governments transmit information and resource requests via the State's OpsCenter software, telephone, ARES, and RACES. Many counties within the State receive information from their cities and special purpose districts within their boundaries.

7.1.3 Coordination with State and Federal Military Resources

The Oregon National Guard may be tasked to provide resources in support of the response. Oregon may also request support from National Guard units in other States via EMAC. Air and Army National Guard personnel from other States will respond in a title 32 duty status and remain under the control of the Governor via the Adjutant General. Their operations in the field will be directed by one or more Task Force Commanders or Joint Force Commanders operating under proper State authority.

Potential missions for the Oregon National Guard and National Guard personnel from other states include:

- Ground, air and water transportation
- Support to law enforcement agencies / security
- Medical Services
- Communications
- Engineering
- Water Purification
- Logistics management / distribution
- Damage assessments / aerial reconnaissance

DoD may be tasked by FEMA (through a mission assignment) to provide resources in a Title 10 duty status for Civil Support operations. Once these assignments have been issued, DoD personnel carrying out missions will remain under the control of the Secretary of Defense via U.S. Northern Command. Their operations in the field will be directed by one or more Task Force Commanders

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or Joint Task Force Commanders operating under proper Federal authority. The defense coordinating officer (DCO) will serve as the link between the Unified Coordination Group and the Task Force Commander.

Potential missions for DoD personnel in a Title 10 status are similar to those of the National Guard except for the limits on domestic law enforcement imposed by the Comitatus Act of 1878. Due to their greater capabilities, DoD organizations may be tasked to deliver extraordinary services in areas such as naval vessel power generation / water purification, enhanced field level medical services and airlift.

Neither State nor Federal military authorities have incident command responsibilities, but as described above, provide command and control for military resources through one or more task forces or joint task forces. State and Federal military resources will be coordinated with civilian resources to achieve unity of effort through the IAP process carried out under the oversight of the Unified Coordination Group.

7.1.4 Coordination with Tribal Governments

Within Oregon, there are 9 federally recognized tribes. Some tribes have their own tribal lands or own property. Tribal governments may coordinate their efforts and requests for resources through the State ECC or directly with the federal government. State coordination with these tribes follows that of coordination with other local governments.

Tribes in Oregon:

Burns Paiute Tribe

Confederated Tribes of Coos, Lower Umpqua and Siuslaw

Coquille Indian Tribe

Cow Creek Band of Umpqua Tribe of Indians

Confederated Tribes of The Grand Ronde Community

Klamath Tribes

Confederated Tribes of Siletz Indians

Confederated Tribes of the Umatilla Indian Reservation

Confederated Tribes of Warm Springs Reservation

7.1.5 Coordination with Other States

The Oregon Emergency Coordination Center is responsible for procuring out-of-State resources through either state to state mutual aid, or EMAC. Initially, this process occurs at the ECC where decisions to request resources from other states through EMAC are made. As the joint State / Federal organization shifts

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to the JFO, the decision to request resources from other states or through EMAC is made by the Operations and or Logistics sections as part of the process for evaluating the availability of resources to carry out, to request resources through EMAC, once the section chiefs make the decision to do so.

7.2 Communications

This section provides a general discussion of incident communications.

7.2.1 Emergency Communications

The earthquake, aftershocks, and resulting tsunami are expected to cause significant damage to public safety and commercial communications systems. The deployment of resources to Oregon will require the establishment of a communication system to support the response. This will require the immediate deployment of communications assets, and the establishment of interoperable within the first 72 hour phase of the event (E+72 hours).

Initial communication restoration targets will focus on the establishment of communication capabilities in support of emergency response operations. Means of communication will include satellite, voice-radio, cellular systems, and microwave. Communications will be established to link components of the joint State / Federal Organization, including the State ECC, JFO, National Logistic Staging Areas, other staging areas, base camps, as well as response teams in the field. Federal mobile communication assets, such as MERS and DoD resources, will be deployed in support of this effort. These assets will also be used to provide support for State and local communications systems as required.

7.2.2 External Communications

At the State level, the ECC is responsible for developing and releasing information about emergency operations to the news media, to personnel involved in the operation, and to other appropriate agencies and organizations. Additional support may be drawn from other State agencies, volunteers, or participants as outlined in the State EOP, ESF -15. The Oregon Joint Information center will be established at the State ECC, and initially activates and directs public information procedures. Coordination with Federal, State, and local entities is necessary to ensure accuracy and consistency in the delivery of emergency public information messages.

The emergency public information effort focuses on developing and delivering lifesaving, life-preserving messages and other disaster and program information to the affected population.

7.3 Oversight

Oversight for the response to this event occurs in accordance with the Oregon Emergency Operations Plan, Local Emergency Operations Plans, NIMS, and the NRF.

7.3.1 Field-Level Response

Emergency response personnel and resources at the field response level come under command of an appropriate authority. Tactical decisions and activities in response to the event come under the authority of the Incident Commander. The Incident Commander is a local government official, although other entities may have specific authority to assume that role (e.g., Oregon State Police or Oregon DOT). A Unified Command or Area Command may be formed, depending on the specific circumstances of the incident.

7.3.2 Local Governments

Local governments include cities, counties, and special purpose districts. Local governments are responsible for the management and coordination of the emergency response and recovery activities within their jurisdictions.

7.3.3 State Government

The State level ECC tasks and coordinates State resources in response to requests from the local government level and coordinates mutual aid among the State agencies and the local level. The governor directs all State agencies to use their resources in response to the incident; and the State Emergency Management Director is responsible for coordination of the activities of all State agencies. These agencies, while operating under their respective authorities, take action in accordance with the objectives identified by the Unified Coordination Group.

7.3.4 Federal Government

The Federal Government provides resources and support in response from the State. In accordance with the NRF, the Federal Coordinating Officer, on behalf of the President, is responsible for coordinating the Federal response. Federal Agencies and Departments, working through ESF's and mission assignments from FEMA, take action in accordance with the objectives identified by the Unified Coordination Group.

7.3.5 Unified Coordination Group

The Unified Coordination Group provides a mechanism for multiple agencies to work objectives. The Unified Coordination Group effectively manages the joint

7. Incident Coordination

State / Federal response to the event and ensures that all decisions will be based on mutually agreed upon objectives. To achieve the common objective of effective incident management, the Unified Coordination Group directs coordinated combined State and Federal operations using Unified Command principles.

The Unified Coordination Group oversees the development of joint operational objectives based on priorities set by the Governor and the President, as well as input from local governments, and others that have identified needs, and situational awareness. Objectives identified by the Unified Coordination Group are incorporated into the joint IAP process and disseminated to the staff through the IAP. Once these objectives have been communicated, joint section chiefs make decisions and take actions necessary to support these objectives.

7.3.6 Military Resources

DoD may be tasked by FEMA (through a mission assignment) and the Oregon National Guard may be tasked by the State ECC (through mission tasks) to provide resources in support of the response. Once these assignments have been issued, DoD and Oregon National Guard elements carry out missions while remaining under the control of the Secretary of Defense and the Governor, respectively. Their operations in the field are directed by one or more task forces or joint task forces operating under proper State and Federal authority. State and Federal military resources will be coordinated with civilian resources to achieve unity of effort through the IAP process carried out under the oversight of the Unified Coordination Group.

8

Intelligence and Situational Awareness

Rapid evaluation of the earthquake and tsunami impact is essential in coordinating and assessment of the extent and intensity of the incident. This is critical to supporting decision making. The flow of information from local jurisdictions to the State ECC, FEMA, and the JFO will require a disciplined approach to facilitate the effective development of a common operating picture within Oregon.

Sources of information include:

- Local, tribal, private-sector, and State agencies (AOCs)
- Federal Agencies' EOCs
- Reports from State and Federal response teams in the field
- Media reports

Earthquake and tsunami data from:

- Loss estimation modeling (HAZUS)
- National Earthquake Information Center (USGS)
- Seismology laboratories at the University of Washington
- The Earthquake Information Clearinghouse (USGS and EERI)
- Pacific Tsunami Warning Center

The most valuable and accurate information is obtained from those in the ground, closest to the potential or actual incident site. Incident Commanders and the planning sections within their incident management teams are often the most reliable sources of information. Planning sections at various levels analyze the information and turn that information into useful intelligence for managers and senior leaders. This step is vital in terms of providing data necessary for decision makers to prioritize activities and the deployment of critical, but often limited resources.

8.1 Intelligence Collection and Utilization

Initial efforts to gain situational awareness will occur at Oregon ECC and at separate Federal operations centers. Once the Unified Coordination Group is formed and the integrated State / Federal organization is established at the JFO, responsibility for intelligence collection and utilization is assumed by the joint

8. Intelligence and Situational Awareness

Planning Section. The Situation Unit of the Planning Section will develop an Information Collection Plan for gathering information from the sources in as comprehensive and consistent manner as the circumstances of the event will allow. The Planning Section will compile sources of information and provide validation and analysis to develop a common operating picture that will be shared with local government, State, and Federal agencies operating centers and elected officials. Because the extent of damage will not be uniform throughout the impacted area, situational awareness within different impacted counties will not be consistent and the pace of response operations will vary. During the early stages of response, requirements will far exceed resources, requiring that the Unified Coordination Group prioritize resource allocation consistent with capabilities.

8.2 Essential Elements of Information (EEI)

Essential Elements of Information (EEIs) are the critical items of information required by senior leaders within a particular timeframe. When related to other valuable information and intelligence, it may be used to reach a logical decision.

EEIs revolve around critical data that are focused on the operational objectives established by the Unified Coordination Group (e.g., status of medical facilities, status of transportation systems, and status of infrastructure). A formal reporting methodology must be provided at all levels to assist the Unified Coordinating Group with formulation of appropriate joint objectives based on a common operating picture.

EXAMPLES:

Essential Elements of Information: Hazard Specific, Safety, Geographic, Seismic, Weather, Demographics, Predictive Modeling, Damage, Status of communications, transportation, EOCs, critical infrastructure, energy systems, activated ESFs, personnel, priorities for response, and major issues and shortfalls.

Specific Information: Limits & severity of damage (% pop.), evacuated, access points, shelters, unmet shelter needs, homes destroyed, public health concerns, hazardous materials releases, search & rescue needs, liquefaction sites, tribal impact, language issues, transportation systems, medical facility damage, state and local priorities, fuel, donations, available food, water, medical supplies, wastewater, and major issues and shortfalls.

Methodology / Source: Predictive modeling, remote / overhead sensing, aerial reconnaissance, media, assessment teams, on-scene reports, SOC coordination center reports, existing maps, GIS database, voluntary agencies, ESFs, CDS,

8. Intelligence and Situational Awareness

OSHA, NRC reports, EPA, USGS, USGS, Tsunami Warning Center, census data, HAZUS outputs, internet service, telephone service companies, DOT, USACE, other Federal agencies, regional offices, PHS, utilities, DoD, FEMA declarations, US Government Leadership, preliminary damage assessments, and elected officials.

Responsible Entity: Operations, Logistics, Mitigation, Safety Officer, and ESF #s

Products: GIS impact maps, situation reports, status briefings, displays, FEMA disaster information databases, daily intelligence briefings / summaries, jurisdiction profiles, FEMA Region X analysis and summary, remote sensing imagery / products, and special reports from FCO and senior management.

Timeline: Initial estimate as soon as possible, within six hours, 12 hours, and updated every operational period, updated every six hours, 12 hours, and ongoing as required.

8. Intelligence and Situational Awareness

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9

Plan Maintenance

The Oregon Office of Emergency Management is responsible for maintenance, update, and dissemination of the Cascadia Subduction Zone Earthquake and Tsunami Operations Plan and its annexes and appendices.

Working with FEMA, local governments, tribes, and special purpose districts, to evaluate and test the Appendix on a regular basis. OEM will modify the Plan on the basis of changes in laws, regulations, policies, State or Federal systems, or procedures, after action reports, and lessons learned from major activations and exercises. OEM will distribute the revised document to the appropriate local, State, Federal, and private-sector entities.

As this is the single greatest catastrophic threat to the State of Oregon, the intent is to update and add to this plan on a two-year cycle. This cycle may be interrupted and revisions to the plan made should significant information or agency policy changes occur.

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A

Overview of Stafford Act Support to States

This overview illustrates actions Federal agencies are likely to take to assist State, tribal, and local governments that are affected by a major disaster or emergency. Key operational components that may be activated include the National Response Coordination Center (NRCC), Regional Response Coordination Center (RRCC), Joint Field Office (JFO), and Disaster Recovery Centers (DRC's).

One: The Department of Homeland Security (DHS) National Operations Center continually monitors potential major disasters and emergencies. When advance warning is received, DHS may deploy and may request that other Federal agencies deploy liaison officers and personnel to a State emergency operations center to access the emerging situation. An RRCC may be fully or partially activated. Facilities, such as mobilization centers, may be established to accommodate Federal personnel, equipment, and supplies.

Two: Immediately after a major incident, tribal and/or local emergency personnel respond and assess the situation. If necessary, those officials seek additional resources through mutual aid and assistance agreements and the State. State officials also review the situation, mobilize State resources, use interstate mutual aid and assistance processes such as the Emergency Management Assistance Compact (EMAC) to augment State resources, and provide situation assessments to the Department of Homeland Security / Federal Emergency Management Agency (DHS/FEMA) regional office. The Governor activates the State emergency operations plan, declares a state of emergency, and may request a State/DHS joint Preliminary Damage Assessment (PDA). The State and Federal officials conduct the PDA in coordination with tribal / local officials as required and determine whether the impact of the event warrants a request for a Presidential Declaration of a major disaster or emergency. Based on the results of the PDA, the Governor may request a Presidential Declaration specifying the kind of Federal assistance needed.

Three: After a major disaster or emergency declaration, an RCCC coordinates initial regional and field activities until a JFO is established. Regional teams assess the impact of the event, gauge immediate State needs, and make preliminary arrangements to set up field facilities. If regional resources are or may be overwhelmed, or if it appears that the event may result in particularly significant consequences, DHS may deploy a national-level Incident Management Assistance Team (IMAT)

Appendix A. Overview of Stafford Act Support to States

Four: Depending on the scope and impact of the event, the NRCC carries out initial activations and mission assignments and supports the RRCC.

Five: The Governor appoints a State Coordinating Officer (SCO) to oversee State response and recovery efforts. A Federal Coordination Officer (FCO), appointed by the President in a Stafford Act declaration, coordinates Federal activities in support of the State.

Six: A JFO may be established locally to provide a central point for Federal, State, tribal, and local executives to coordinate their support to the incident. The Unified Coordination Group leads the JFO. The Unified Coordination Group typically consists of the FCO, SCO, and senior officials from other entities with primary responsibility for an aspect of an incident. This group may meet initially via conference calls to develop a common set of objectives and a coordinated initial JFO action plan.

Seven: The Unified Coordination Group coordinates field operations from a JFO. In coordination with State, tribal and/or local agencies, Emergency Support Functions assess the situation and identify requirements. Federal agencies provide resources under DHS/FEMA mission assignments or their own authorities.

Eight: As immediate response priorities are met, recovery activities begin. Federal and State agencies assisting with recovery and mitigation activities convene to discuss needs.

Nine: The Stafford Act Public Assistance program provides disaster assistance to States, tribes, local government, and certain private nonprofit organizations. FEMA, in conjunction with the State, conducts briefings to inform potential applicants of the assistance that is available and how to apply.

Ten: Throughout response and recovery operations, DHS/FEMA Hazard Mitigation program staff at the JFO look for opportunities to maximize mitigation efforts in accordance with State hazard mitigation plans.

Eleven: As the need for full-time interagency coordination at the JFO decreases, the Unified Coordination Group plans for selective release of Federal resources, demobilization, and closeout. Federal agencies work directly with disaster assistance grantees (i.e., State or tribal governments) from their regional or headquarters offices to administer and monitor individual recovery programs, support, and technical services.

Summary of Stafford Act to Support States:

Federal Resources – may deploy in advance of the incident.

Incident Occurs – local first responders arrive on scene – notify elected / appointed official and activate local EOC; requests mutual aid & State assistance.

Governor Activates State EOC – assesses damage, requests EMAC or other interstate mutual aid, requests Presidential Declaration.

Appendix A. Overview of Stafford Act Support to States

FEMA – evaluates situation and Governor’s request. Recommends FEMA Administrator assess situation and Governor’s request. FEMA Administrator recommends through the DHS Secretary that the President declares emergency or major disaster. Response teams & other resources deploy.

Appendix A. Overview of Stafford Act Support to States

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B

State of Oregon Core Capabilities for Enabling Response and Delivering Essential Needs

Situational Assessment

Provide all decision makers with relevant and accurate information regarding the nature and extend of the hazard and the status of the response. Develop situational awareness to establish an initial Common Operating Picture (COP) with all affected jurisdictions.

- **ESF-5** Deploy primary and support agencies capable of aerial reconnaissance to conduct initial impact assessment that drives leadership decision making. Establish reporting mechanisms between the state, local and tribal jurisdictions:
- **ESF-1, 2, 4, 7** assets and resources.
- **ESF-10** Determine potential chemical, physical, natural and biological hazards resulting from a catastrophic earthquake that may affect the safety and health of Local, State and Federal response and recovery workers.
- **ESF-12** Establish base line energy impacts and sustainable capabilities.

Critical Communications

Coordinate notification and integration of Statewide Communications Plan. Ensure critical communications in support of: security, situational awareness and rapid communications by any and all means available – amongst & between impacted communities and response assets.

- **ESF – 2** Establish operational information channels and connectivity between state, local, and tribal jurisdictions.
- Determine functionality of 9-1-1 call processing and delivery through Public Safety Answering Points (PSAPS) and call dispatch systems.
- Utilize the Emergency Alert system for community notifications.

Public Messaging

Develop an integrated external affairs organization encompassing State, local and tribal jurisdictions for accurate, coordinated and consistent messaging with each other and media outlets. Deliver prompt, understandable by diverse populations and actionable messages to the impacted communities requiring

Appendix B. Core Capabilities

lifesaving protective actions to the populations around the impacted areas who can assist survivors and/or the response organization, and the nation's citizens and international community.

- **ESF – 5** Establish communications between State, local and tribal elected officials and their staffs.
- **ESF – 15** Coordinate public messaging with State, local and tribal ESF – 15 organizations to provide special instructions for evacuation, shelter locations and indicate the status of sheltering.

Critical Transportation

Provide infrastructure access and transportation services for response priority objectives, including evacuation of people in imminent danger, and delivery of vital response services and resources to impacted areas. Determine the most appropriate transportation services and lifeline routes that can facilitate the response and support survivor needs.

- **ESF – 1** Assess what regional aviation portals can facilitate air operations for each impacted jurisdiction including assessment of local landing sites capable of supporting heavy incoming and outgoing flights.
- **ESF – 3** Coordinate debris clearance with jurisdictions to facilitate:
 - Arrival of responders;
 - Provide transportation for evacuation of functional needs populations prioritized by each jurisdiction and medical facilities / health departments;
 - Determine the distance to and availability of shelters to allow for rapid round-trip transportation;
 - Assemble a roads and bridges task force to expedite restoration of ground routes to isolated communities;
 - Coordinate with the Department of Homeland Security (DHS) to initiate emergency waiver requests to facilitate evacuation, including:
 - Driver hour of service waivers from the U.S. Department of Transportation,
 - Truck size and weight-limit waivers from Oregon Department of Transportation,
 - Jones Act waivers from DHS.

Command and Control

Establish unified response actions across impacted areas and coordinate unity of effort across local incident command(s), the impacted / affected jurisdictions, and the Federal response. Deploy State resources to impacted jurisdictions to determine the baseline response needs and establish command and control in conjunction with local and tribal jurisdictions.

Appendix B. Core Capabilities

- **Adjunct Agencies:** Integrate whole community elements including private sector and non-governmental organizations into the command and control structure.
- **ESF – 7** Designate and develop strategic statewide regional response areas to support logistics, responders and evacuations.

Mass Search & Rescue Operations

Deliver Whole Community search and rescue services to survivors in need, in order to save the greatest number of endangered lives in the shortest time possible. Assess air, sea, and structural search and rescue needs and request deployment of assets to meet life-saving needs and sustaining operations in support of local assets and capabilities.

- **ESF – 3** Activate U.S. Army Corps of Engineers (USACE) structural specialist support for urban search and rescue task forces for deployment and employment in the affected areas;
- **ESF -7** Determine staging areas for structural search and rescue task forces in proximity to impacted areas;
- **ESF – 9** Expand USCG operations with jurisdictional priorities for sea based Search and Rescue.
- **ESF – 9** Coordinate with Defense Coordinating Element (DCE) deployment of Department of Defense or National Guard search and rescue assets;
- **ESF-9** Consider requests to the United States Agency for International Development (USAID) for deployment of foreign search and rescue teams through the International Assistance System (IAS).

Public Health & Medical Treatment

Triage requirements from multiple jurisdictions and prioritize emergency – level health and medical treatment resources to meet critical need(s). Deploy countermeasures and prophylaxis to survivors in need within the impacted areas.

- **ESF – 6** Identify immediate feeding, hydration, and bulk distribution (including durable medical equipment (DME) and Consumable Medical Supplies (CMS) requirements for the affected areas and coordinate with logistics to support requirements;
- **ESF – 8** Validate operability of local medical facilities and develop needs assessment for deployment of personnel and supplies.
 - Request deployment of available DMAT teams according to priorities.
 - Make requests to NGO's and private non-profit organizations to provide emergency level health and medical services.
 - Provide pharmacy prescription support for population (based on a national average data from HHS).

Appendix B. Core Capabilities

- **ESF – 13** Provide security for the transportation and dissemination of medical supplies and pharmaceuticals.

Mass Care Services

Provide life-sustaining services to impacted population with a focus on hydration, feeding and sheltering. Instruct affected population on sheltering guidance while mass care services are prioritized and deployed.

- **ESF -6, ESF-15** Provide shelter instructions for all jurisdictions and provide sheltering locations to ambulatory populations;
- **ESF - 6** Employ shelter location identification systems to begin identifying available facilities, capacities, and uses.
- Activate family reunification service systems (e.g. National Mass Evacuation Tracking System, National Family Emergency Registry and Locator System, Safe and Well, National Emergency Child Locator Center) and deploy National Center for Missing and Exploited Children Team Adam (missing child rapid response system) to support reunification at the state and local levels.
 - Provide overall coordination of sheltering, feeding, and other activities to support emergency needs of survivors including economic assistance and other services for individuals impacted by an incident.
- **ESF – 7** Establish Community Point of Distribution (C-POD) locations to provide water, food and life sustaining resources for survivors able to shelter in place. Due to damaged infrastructure, these locations will need to be within walkable distances of survivors;

Fatality Management Services

Mass fatalities from this event scenario assume loss of life and human suffering that cannot be met through usual individual, local and State resources.

- **ESF – 1** Infrastructure / roadway access for transportation;
- **ESF – 6** Provide family members with access to areas for identification, collection and making transportation arrangements;
- **ESF – 8** Public Health and Medical Services is responsible for establishing:
 - Mortuary Support Services;
 - Temporary storage ;
 - Recovery and/or collection of deceased;
 - Identification;
 - Provide family members with information respect to the identification and collection of the deceased as well as death certificates.

Environmental Health and Safety

Appendix B. Core Capabilities

Ensure event specific environmental health and safety focused guidance is implemented within both for the affected communities and by response forces and Whole Community partners. Support jurisdictions to mitigate life threatening toxin hazards, inform public on protective measures, and prepare responders for contact with environmental hazards.

- **ESF – 5** ensure that incident specific briefing and personal protective equipment training are accomplished prior to responder deployment or employment in the impacted areas;
- **ESF – 10** To provide technical assistance to local and tribal jurisdictions:
 - Assess hazardous materials locations in impacted areas that may threaten responder and survivor safety;
 - Determine actions to prevent, minimize, or mitigate a release of hazardous materials and oil spills and develop a plan for cleanup or evacuation prioritization;
 - Coordinate with local and tribal partners to identify locations of hazardous materials storage, treatment and disposal sites and other potential areas of releases of oil and hazardous materials;
- **ESF – 15** Provide information and safety measures regarding environmental hazards to populations and responders.

Stabilize & Repair

Identify and stabilize damaged critical infrastructure to minimize cascading threats to the population and environmental resources. Coordinate public works and engineering related missions in support of the State Emergency Operations Plan.

- **ESF – 1, ESF – 5, ESF-7, ESF-10, ESF-12:**
 - Prioritize restoration of energy grid to focus on life saving;
 - Coordinate resources deployed through the Oregon Public Works Cooperative Assistance Agreement, roadway clearance and bridging, providing engineering expertise, hazardous materials response, fuels and power;
 - Provide heavy equipment and engineering resources;
 - Assess power plants, refineries, chemical facilities for damage and vulnerabilities;
 - Coordinate contracting assistance and maintain an emergency contractor registry for public works.

Public Safety and Security

Support local jurisdictions to re-establish public safety operations that ensure saving lives and protecting property. Provide support for responders engaged in lifesaving and sustaining operations.

Appendix B. Core Capabilities

- **ESF-13** Deploy assessment teams to coordinate with local and tribal partners, assess law enforcement capabilities and provide situational awareness for determining operational objects driven by the consequences and severity of the incident(s).
 - Request assistance from the Oregon National Guard to secure critical infrastructure in coordination with local law enforcement agencies;
 - Determine needs of local law enforcement and county jails for transportation and incarceration of inmates as needed.

Public & Private Services & Resources

Re-establish the public and private sector supply chain(s) to restore survivor access to goods and services and to maintain economic activities in Oregon.

- Coordination with private sector suppliers to enable rapid distribution of commodities and medical supplies;
- Provide initial guidance for Public Assistance (PA) related issues and identify critical sewer, water, and transportation needs, post incident.
- **ESF – 3** Assist in establishing safe, accessible areas for points of distribution as well as sheltering.
- **ESF – 6** Coordination with NGOs and the private sector to establish support facilities for feeding, sheltering, staging and distribution.
- Coordinate debris management activities with public and private sector to begin recovery operations;
- Obtain public works and engineering support.

C

Authorities and References

Federal

The Homeland Security Act of 2002, Pub. L. 107-296, Stat. 2135 (2002) (codified predominantly at 6 U.S.C. §§ 101-557) as amended with respect to the organization and mission of the Federal Emergency Agency in the Department of Homeland Security Appropriations Act of 2007, Pub. L. 109-295, 120 Stat. 1355 (2006), established a Department of Homeland Security (DHS) as an executive department of the United States. The Homeland Security Act consolidated component agencies, including the Federal Emergency Management Agency (FEMA), into the Department. The Secretary of Homeland Security is the head of the Department and has direction, authority, and control over it. All functions of all officers, employees, and organizational units of the Department are vested in the Secretary.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. 93-288, 88 Stat. 143 (1974), codified in 42 U.S.C. §§ 5121-5206 (2007), was also amended in the Department of Homeland Security Appropriations Act of 2007, Pub. L. 109-295, 120 Stat. 1355 (2006), particularly title VI, the Post Katrina Emergency Management Reform Act 2006 (discussed below). The Stafford Act describes the programs and processes by which the Federal government provides disaster and emergency assistance to State and local governments, tribal nations, eligible private nonprofit organizations, and individuals affected by a declared major disaster or emergency. The Stafford Act covers all hazards, including natural disasters and terrorist events.

The Post-Katrina Emergency Management Reform Act (PKEMRA), which is Title VI of the Department of Homeland Security Appropriations Act, 2007, Pub. L. 109-295, 120 Stat. 1355 (2006), clarified and modified the Homeland Security Act with respect to the organizational structure, authorities, and responsibilities of FEMA and the FEMA Administrator. In addition to these modifications, PKEMERA made changes – some appearing in the Homeland Security Act and some in the Stafford Act – directing FEMA, among other things, to: Establish a Disability Coordinator and develop guidelines to accommodate individuals with disabilities; add disability and English proficiency to the list of provisions requiring nondiscrimination in relief and assistance activities; establish the National Emergency Family Registry and Locator System to reunify separated family members and assist in Establishing the National Emergency child Locator center to locate missing children after a major disaster or emergency; coordinate and support precautionary evacuations and recovery efforts; provide transportation assistance for relocating and returning individuals displaced from their residences in a major disaster; provide rescue, care, shelter, and essential needs assistance to individuals with household pets and service animals as well as to such pets and animals; provide case management assistance to identify and address unmet needs of victims of major

Appendix C. Authorities and References

disasters; and receive input from a National Advisory Council, including State and private-sector member, about the development and revision of the NRF and other related plans or strategies.

State

- Office of the State Fire Marshal. Oregon Fire Services Mobilization Plan. March 2004
- Oregon Administrative Rule 104-010-0005. Participation of Local Governments in the Emergency Management Performance Grant (EMPG) of the FEMA
- Oregon Emergency Management. State of Oregon Emergency Declaration Guidelines for Local Elected and Appointed Officials. March 2005
- Oregon Revised Statutes 401

Local

- County/City Emergency Operations Plans and Supporting Documents
- Memoranda of Agreement / Understanding

Other

- All other Public Laws or Executive Orders enacted or to be enacted which pertain to emergencies/disasters

D

Acronyms

AAR	After Action Report
ACDP	Acute and Communicable Disease Prevention
ACMS	Appellate Court Management System
ACP	Area Contingency Plan
ACRT	Animal Care Response Team
ACS	Auxiliary Communications Service
ADA	American Disabilities Act
AHID	Animal Health Identification Division
AERO	Department of Aviation
AFIS	Animal & Food Industry Services – Office of Veterinary Service
AFO	Area Field Office
AFRCC	Air Force Rescue Coordination Center
ALS	Advanced Life Support
AM	Amplitude Modulation
AMR	American Medical Response
AMSC	American Satellite Communications
AOC	Agency Operations Center
APHIS	Animal Plant Health Inspection Service
APR	Air Purifying Respirators
ARC	American Red Cross
ARES	Auxiliary Radio Emergency Service
ASA	Ambulance Service Area
ASPR	Assistant Secretary for Preparedness and Response
AST	Ambulance Strike Team
ATC	Applied Technology Council
ATC	Air Traffic Control
ATCSCC	Air Traffic Control System Command Center
BATFE	Bureau of Alcohol, Tobacco, Firearms and Explosives
BCD	Building Codes Division
BCP	Business Continuity Plan
BEA	Bureau of Economic Analysis, US
BFS	Business & Fiscal Services Division
BHERCT	Behavioral Health Emergency Response Coordination Team
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BLS	Basic Life Support
C2	Command and Control
CAF	Children and Families
CAFO	Confined Animal Feeding Operations
CAP	Civil Air Patrol
CAT	Community Action Team
CBP	U.S. Customs and Border Protection
CBRNE	Chemical, Biological, Radiological / Nuclear, and Explosive
CCAP	Chemistry Cooperative Agreement Program
CDC	Central Distribution Center
CDC	Center for Disease Control
CDL	Commercial Driver's License

CEI	Critical Energy Infrastructure
CERT	Community Emergency Response Teams
CIKR	Critical Infrastructure Key Resources
CIS	Critical Infrastructure Sectors
CIS	Catastrophic Incident Supplement
CIS	Court Interpreter Service
CISAR	Catastrophic Incident SAR
CISD	Critical Incident Stress Debriefing
CJIS	Criminal Justice Information System
CLHO	Conference of Local Health Officials
CMHP	Community Mental Health Program
CMS	Centers for Medicare & Medicaid Service
CMS	Consumable Medical Supplies
CSIM	Critical Stress Incident Management
CSZ	Cascadia Subduction Zone
COA	Course of Action
COAD	Community Organizations Active in Disaster
COO	Chief Operating Officer
COOP	Continuity of Operations
COP	Common Operating Picture
COP	Chief Operations Officer
COW	Cellular on Wheels (portable, self-contained)
C-POD	Community Point of Distribution
CREW	Cascadia Region Earthquake Workgroup
CRT	Crisis Response Team
CSIM	Critical Stress Incident Management
CSEPP	Chemical Stockpile Emergency Preparedness Program
CSZ	Cascadia Subduction Zone
DAS	Department of Administrative Services
DCBS	Department of Consumer & Business Services
DCE	Defense Coordination Element
DCO	Defense Coordination Officer
DEA	Drug Enforcement Agency
DEQ	Department of Environmental Quality
DHS	U.S. Department of Homeland Security
DHS	Department of Human Services
DHS	Department of Health Services
DLCD	Department of Land Conservation and Development
DMAT	Disaster Medical Assistance Team
DME	Durable Medical Equipment
DMORT	Disaster Mortuary Operational Response Team
DMSU	Disaster Medical Support Unit
DMV	Department of Motor Vehicles
DOC	Department of Corrections
DOE	Department of Energy
DOGAMI	Department of Geology and Mineral Industries
DRC	Disaster Recovery Center
DPRT	Debris Planning and Response Team
DPSST	Department of Public Safety Standards and Training
DPWG	Domestic Preparedness Working Group
DRC	Disaster Recovery Center
DSCA	Defense Support of Civil Authorities
DSL	Department of State Lands
DSS	Digital Satellite Service
DVET	Disaster Veterinary Assistance

EAS	Emergency Alert System
ECC	Emergency Coordination Center
EEI	Essential Elements of Information
EERI	Earthquake Engineering Research Institute
ELT	Electronic Locator Transmitter
EMAC	Emergency Management Assistance Compact
EMR	Electronic Medical Record
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plans
EPA	Environmental Protection Agency
EPA	Emergency Preparedness Advisor (Governors)
EPR	Emergency Preparedness and Response (US DHS)
ERKV	Emergency Response Kitchen Vehicle
ERT	Emergency Response Team
ERV	Emergency Response Vehicle
ESF	Emergency Support Function
ETSD	Enterprise Technology Services Division
EVMS	Electronic Variable Message Sign
FAA	Federal Aviation Administration
FAC	Family Assistance Center
FAR	Federal Aviation Regulation
FBI	Federal Bureau of Investigation
FBO	Faith Based Organization
FCC	Federal Communications Commission
FCO	Federal Coordinating Officer
FDA	Food and Drug Administration
FECC	Federal Emergency Communications Coordinator
FEMA	Federal Emergency Management Agency
FEMIS	Federal Emergency Management Information System
FERC	Federal Energy Regulatory Commission
FERN	Food Emergency Response Network
FHWA	Federal Highway Administration
FHWA-ER	Federal Highway Administration – Emergency Relief Program
FIAS	Financial Integrated Accounting System
FM	Frequency Modulation
FMCSA	Federal Motor Carrier Safety Administration
FMS	Federal Medical System
FNARS	Federal National Alert Radio System
FNS	Food & Nutrition Services
FOSC	Federal On-Scene Coordinator
FPS	Federal Protective Service
FSOS	U.S. Food Safety and Inspection Service
GETS	Government Emergency Telecommunications Service
GIS	Geographic Information System
GPM	Gallons per Minute
GRC	Governors Recovery Cabinet
GSA	General Services Administration
GW	Gigawatt (Electrical Infrastructure)
HAN	Health Alert Network
HAZMAT	Hazardous Materials
HEAR	Hospital Emergency Administrative Radio
HF	High Frequency
HHS	Health and Human Services
HITRAC	Homeland Infrastructure Threat & Risk Analysis Center

Appendix D. Acronyms

HOSCAP	Hospital Capacity Capability Tracking System
HRSD	Human Resources Service Division
HSPD	Homeland Security Presidential Directive
HSPRP	Health Security Preparedness & Response Program
HUD	U.S. Department of Housing and Urban Development
HVAC	Heating, Ventilation, Air Conditioning
IA	Individual Assistance
IAA	Interagency Agreement
IAB	Information Analysis Brief
IAP	Incident Action Plan
IAO	Individual Assistance Officer
IAS	International Assistance System
ICE	U.S. Immigration and Customs Enforcement
ICP	Incident Command Post
ICS	Incident Command System
IGA	Inter Governmental Agreement
IHP	Individuals & Households Program
IMAT	Incident Management Assistance Team
IMATSuRT	Incident Management Surgical Response Team
IMT	Incident Management Team
IRCT	Incident Response Coordination Team
IRMS	Inventory Management System
IRR	Initial Response Resources
ISAC	Information Sharing and Analysis Center
ISB	Incident Support Base
ISP	Incident Specific Planning
IST	Incident Support Team
ITS	Intelligent Transportation System
IWG	Integrated Working Group
JEOC	Joint Emergency Operations Center
JFC	Joint Force Commander
JFO	Joint Field Office
JHT	Joint Housing Team
JIC	Joint Information Center
JIS	Joint Information System
JOC	Joint Operations Center
JSPU	Joint Strategic Recovery Planning Unit
JTF	Joint Task Force
JUC	Joint Unified Command
LAC	Local Assistance Center
LAN	Local Area Network
LEDS	Law Enforcement Data Systems
LHD	Local Health Department
LIDAR	Light Detection and Ranging
LIMS	Laboratory Information Management System
LMC	Logistics Management Center
LMD	Logistics Management Directorate
LMR	Land Mobile Radio
LNG	Liquid Natural Gas
LNO	Liaison Officer
LPTV	Low Power Television
LRN	Laboratory Response Network
LS	Lateral Spread
LTCR	Long-Term Community Recovery
LZ	Landing Zone

MA	Mission Assignment
MAC	Multi Agency Coordination
MAEAD	U.S. Department of Transportation, Maritime Administration
MCC	Movement Coordination Center
MCI	Multiple Casualty Incident
MCH	Maternal & Child Health
MDRC	Mobile Disaster Recovery Center
MEAD	Maritime Administration
MEDEVAC	Medical Evacuation
MEO	Medical Examiner's Office
MERS	Mobile Emergency Response Support
MFI	Mass Fatalities Incident
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRE	Meals-Ready-To-Eat
MRC	Medical Reserve Corps
MRV	Multi Radio Van
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MSN	Medical Special Needs
MST	Mission Support Team
MTU	Mobile Tower Unit
Mw	Moment Magnitude
NAHERC	National Animal Health Emergency Response Corps
NAS	National Airspace System
NAWAS	National Warning System
NCC	National Coordinating Center for Telecommunications
NCP	National Contingency Plan
NCS	National Communications Plan
NCIC	National Criminal Investigation Center
NDMS	National Disaster Medical System
NDMT	National Disaster Medical Team
NECLC	National Emergency Child Locator Center
NEF	National Essential Functions
NEFRLS	National Emergency Family Registry and Locator System
NFIP	National Flood Insurance Plan
NEIC	National Earthquake Information Center
NERC	North American Electric Reliability Council
NGA	National Geospatial Intelligence Agency
NGB	National Guard Bureau
NGO	Non-Governmental Organization
NHAN	National Health Alert Network
NHTSA	National Highway Transportation Safety Administration
NICC	National Interagency Coordination Center
NICC	National Infrastructure Coordination Center
NIFC	National Interagency Fire Center
NIMS	National Incident Management System
NISAC	National Infrastructure Simulation & Analysis Center
NLC	National Logistics Coordinator
NLETS	National Law Enforcement Telecommunications System
NLS	National Logistics System
NMETS	National Mass Evacuation Tracking System
NOAA	National Oceanic Atmospheric Administration
NOC	National Operations Center
NORAD	North American Aerospace Defense command

NORTHCOM	U.S. Northern Command
NOVA	National Organization of Victims Assistance
NPS	National Park Service
NRC	National Response Corporation Environmental Services
NRCC	National Response Coordination Center
NRF	National Response Framework
NRS	National Radio System (FEMA)
NSP	National Search & Rescue Plan
NSS	National Shelter System
NTIA	National Telecommunications & Information Administration
NTSB	National Transportation Safety Board
NVOAD	National Volunteer Organizations Active in Disaster
NVRT	National Veterinary Response Team
NWCG	North West Coordination Group
NWACP	Northwest Area Committee (DEQ Regional Response Team)
NWCG	National Wildlife Coordination Group
NWS	National Weather Service
OBDD	Oregon Business Development Department
OCS	Oregon Community Services
OCVAS	Oregon Commission for Voluntary Action Service
ODA	Oregon Department of Agriculture
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish & Wildlife
OEM	Oregon Emergency Management
OEMIT	Oregon Emergency Management Internet Technology
OEPH	Office of Environmental Public Health
OERS	Oregon Emergency Response System
OFB	Oregon Food Bank
OFDA	Oregon Funeral Directors Association
OHA	Oregon Health Authority
OHCS	Oregon Housing & Community Services Department
OIMB	Oregon Institute of Marine Biology
OJD	Oregon Judicial Department
OJIN	Oregon Judicial Information Network
OMD	Oregon Military Department
OMDT	Oregon Medical Disaster Team
OMES	Oregon Medical Examiner System
ONA	Other Needs Assistance
OPA	Oil Pollution Act
OPCON	Operational Control
OPHD	Oregon Public Health Division
OPUC	Oregon Public Utilities Commission
ORM	Operational Risk Assessment
ORNG	Oregon National Guard
ORS	Oregon Revised Statute
ORVOAD	Oregon Volunteer Organizations Active in Disaster
ORWARN	Oregon Water / Waste Water Agency Response Network
OSC	On-Scene Coordinator
OSFM	Oregon State Fire Marshal
OSHA	Occupational Safety and Health Administration
OSHD	Oregon Safety & Health Division
OSP	Oregon State Police
OSPHL	Oregon State Public Health Lab

Appendix D. Acronyms

OSSPAC	Oregon Seismic Safety Policy Advisory Commission
OSWS	Oregon State Warning System
OVMA	Oregon Veterinary Medical Association
PA	Public Assistance
PAR	Population at Risk
PARC	Pesticide Analytical & Response Center
PBX	Phone Branch Exchange
PDA	Preliminary Damage Assessment
PDX	Port of Portland, International Airport
PFM	Portable Maximum Flood
PGA	Peak Ground Acceleration
PGV	Peak Ground Velocity
PHEP	Public Health Emergency Preparedness
PHD	Public Health Department
PHIN	Public Health Information Network
PHMSA	Pipeline & Hazardous Materials Safety Administration
PIM	Public Information Manual
PIO	Public Information Officer
PIT	Public Information Team
PLB	Personal Locator Beacon (Same as ELT Freq.)
POC	Point of Contact
POD's	Points of Distribution
PPE	Personal Protective Equipment
PSA	Public Service Announcement
PSAP	Public Safety Answering Point
PSIC	Public Safety Interoperable Communications
PSMA	Pre-Scripted Mission Assignment
PSTN	Public Switched Telephone Network
PUC	Public Utilities Commission
RA	Regional Administrator
RACES	Radio Amateur Civil Emergency Services
RADS	Regional Advisors to Department
RCIS	Reliability Coordinator Information System
RDC	Regional Data Center
RDC	Regional Dispatch Center
RDF	Rapid Deployment Force
RDMB	Risk Development & Modeling Branch
REMAC	Regional Emergency Management Advisory Committee
REOC	Regional Emergency Operations Center
RETCO	Regional Emergency Transportation Coordinator (US DOT)
RF	Radio Frequency
RIMS	Response Information Management System
RISC	Regional Interagency Steering Committee
RPC	Recovery Planning Cell
RRCC	Regional Response Coordination Center
RRT/NWACP	Regional Response Team/North West Area Committee
RSC	Responder Support Camp
RSP	Regional Support Plan
RST	Responder Support Team
RTK-GPS	Real-time Kinematic Global Positioning System
SA	Spectral Acceleration
SA	Staging Area
SAP	Safety Assessment Program
SAR	Search and Rescue
SARA	Superfund Amendments Reauthorization ACT, Title III

SBA	U.S. Small Business Administration
SCO	State Coordinating Officer
SDA	State Distributing Agencies
SDARS	Satellite Digital Audio Radio Service
SERV-OR	State Emergency Registry of Volunteers in Oregon
SITREP	Situation Report
SME	Subject Matter Expert
SMVP	State Managed Volunteer Pool
SNPS	Strategic National Pharmaceutical Stockpile
SNS	Strategic National Stockpile
SOP	Standard Operating Procedure
SPD	Seniors & Persons with Disabilities
SRSD	Safety, Reliability and Security Division (OPUC)
SSB	Support Services Branch
SSNERR	South Slough National Estuarine Research Reserve
STR	Strategic Technology Reserves
STRAHNET	Strategic Highway Network (Federal)
SWAN	State Wide Area Network
TAG	Adjutant General
TCC	Toketee Control Center
TCL	Target Capabilities List
TDD	Telephone Device for the Deaf
TF	Task Force
TFR	Temporary Flight Restriction
TMOC	Transportation Management Operations Center
TOC	Transportation Operations Center
TRANSCOM	U.S. Transportation Command
TSA	Transportation Security Administration
TTX	Table Top Exercise
U.S. EPA	U.S. Environmental Protection Agency
UACG	Unified Area Coordination Group
UC	Unified Command
UCG	United Coordinated Group (Federal)
UHF	Ultra High Frequency
USAR	Urban Search and Rescue
USAID	U.S. Agency for International Development
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USC	U.S. Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture Food and Nutrition Service
USDOD	U.S. Department of Defense
USDOE	U.S. Department of Energy
USDHCD	U.S. Department of Housing & Community Development
USDOI	U.S. Department of the Interior
USDOJ	U.S. Department of Justice
USDOS	U.S. Department of State
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFDA	U.S. Food & Drug Administration
USFS	U.S. Forest Service
USGS	U.S. Geological Service
USMS	U.S. Marshals Service
USN	U.S. Navy
USPHS	U.S. Public Health Service

Appendix D. Acronyms

VAL	Voluntary Agency Liaison
VAT	Veterinary Assistance Teams
VHF	Very High Frequency
VMAT	Veterinary Medical Assistance Team
VMS	Variable Message Sign
VOAD	Voluntary Organizations Active in Disaster
VOIP	Voice over Internet Protocol
VOLAG	Voluntary Agency
WAN	Wide Area Network
WATS	Wide Area Telephone System
WEI	Western Energy Institute
WPS	Wireless Priority Service
WRD	Oregon Water Resource Department

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Cascadia Subduction Zone Catastrophic Annex ESF 1 – Transportation

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ESF 1. Transportation

ESF 1 Tasked Agencies	
Primary Agencies	Oregon Department of Transportation (ODOT)
Supporting Agencies	Department of Administrative Services (DAS) Department of Aviation (AERO) Department of Corrections (DOC) Oregon Department of Energy (ODOE) Oregon Department of Forestry (ODF) Oregon Military Department (OMD) Department of State Lands (DSL) Oregon State Police (OSP)
Adjunct Agencies	Civil Air Patrol (CAP)

1 Purpose

ESF 1 coordinates the maintenance and provision of transportation and transportation assets following a Cascadia Subduction Zone earthquake and resultant tsunami. ESF-1 addresses assessing damage to and restoring and maintaining transportation networks, specifically roads and bridges. ESF 1 includes the transportation of personnel, materials, goods, and services to emergency sites, and supporting evacuation and re-entry operations for threatened areas.

2 Scope

- Provide or coordinates the provision of transportation support to State agencies, local jurisdictions, tribal governments, volunteer organizations, and non-governmental organizations requiring assistance in performance of their disaster response and recovery missions.
- Coordinate the flow of land, air, rail and marine traffic in and to the disaster area for the effective movement of relief supplies, personnel and equipment.
- Liaison with commercial transportation providers concerning significant interruptions of service.
- Support evacuation and re-entry operations for threatened areas.
- In conjunction with ESF 8, ESF 1 provides transportation of the Strategic National Stockpile during a deployment in the State of Oregon.

3 Roles and Responsibilities

3.1 Primary Agency

3.1.1 Oregon Department of Transportation

Priorities

- Assess damage to roadways, bridges and tunnels and begin work on all that have been impacted. Response becomes recovery as roadways are made accessible and serviceable to get to impacted communities;
- Provide assistance to counties and local municipalities as support. (Oregon Public Works Emergency Response Cooperative Assistance Agreement);
- Identify heavily impacted areas and prioritize their repair;
- Identify and acquire assets to reach heavily impacted areas;
- Roadway repair priorities: provide an immediate and complete evaluation of 'lifeline' roads. Provide temporary accessibility and repair to make them usable for response and evacuation.

Assets

- Can provide rapid damage assessment with assistance from the Military as well as the Civil Air Patrol to provide aerial reconnaissance and photography;
- Fleet fuel stations located all over the State, at regional and district offices. However, ODOT cannot supplement other agencies' needs for fuel;
- Agreements with Forest Service and BLM to have access to forest roads for access to heavily damaged areas. Will have to rely on local and county jurisdictions to allow access across private land, potentially through eminent domain;
- ODOT has five Regional Offices throughout the State responsible for multiple district offices;
- 14 District Offices with staff and fleet equipment;
- Pre-identified staging areas for equipment: State Fairgrounds in Salem, large office in Bend, and Rest Areas up and down the I-5 corridor are all capable of staging equipment;
- Bend District Office can be used as an alternate AOC for ODOT. All district offices have copies of plans, operation manuals and standard operating procedures to deal with emergencies;
- Technical support branch consisting of: bridge inspectors, other technical specialists, public works support branch, water unit, building inspection, debris management, trucking unit, air transport unit, rail transport unit, water transport;
- Photo / video section provides damage assessment documentation with aerial support from OMD, AERO and CAP;
- Business continuity unit within ODOT AOC;
- Business continuity plans exist with the Department of Motor Vehicles;
- 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.

ESF 1. Transportation

- 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;
- ODOT personnel arrive on response with 'go kits' and are prepared to be self-sufficient for a minimum of 96 hours. That includes food, clothing, and whatever personal items that are needed;
- Have MOU's with county public works divisions to provide support;
- ODOT has multiple bridge engineers, two assigned in every district in the State;
- Two ODOT engineers are trained in structural engineering and are assigned to OSFM USAR teams;
- ODOT Incident Response crews can provide basic hazardous materials response (oil and gas) and traffic control for HAZMAT response.

Communications

- Can project public messaging information via solar powered message boards and surviving highway information systems.
- All of the regional and district ODOT AOC's has 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;
- 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

- Coordinate all transportation-related missions in support of the State Emergency Operations Plan;
- 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;
- Work with the Oregon AERO in regard to aviation-related response activities; including the use of State owned airports.
- Provide transportation-related public information and mapping support to the Governor's Office, the Oregon ECC, or the lead state response agency, in addition to the public information and mapping support work done within ODOT, during response and recovery activities;
- Coordinate with the U.S. Department of Transportation Region 10 Regional Emergency Transportation Coordinator (RETCO) or designee, to obtain federal transportation support.
- Work with local road authorities and the Federal Highway Administration (FHWA) to implement the Federal-Aid Highway Emergency Relief (ER) program for federal-aid highways in Oregon.

ESF 1. Transportation

- Coordinate and control emergency highway traffic regulation in conjunction with the OSP, OMD, and the FHWA;
- Maintain liaison with the Oregon Chapter of the Association of General Contractors and construction and equipment rental companies;
- ODOT provides liaisons with FHA, the Federal Strategic Highway Network (STRAHNET) through DOD, USACE, OMD, and USCG;
- Capable of planning, designing and developing roads, highways, bridges and tunnels. Can and will provide this support to local communities as needed;
- Mapping and GIS capabilities;
- Conduct aerial reconnaissance and photographic missions, as requested, provided resources are available;
- ODOT has up-to-date 'winter' emergency operations plans that are fairly comprehensive emergency operation plans. These operation plans and the emergency operations tool kit are updated before and after every winter;
- Work with DEQ to ensure environmental issues are taken care of when establishing access to coastal communities with temporary or new roadways;
- Coordination with ESF-10 on providing traffic control and intelligence for oil and hazardous material issues;
- Work with JIC and County Operations Centers to establish public messaging priorities and locations;
- Provide evacuation and security assistance through use of barricades and signage;
- Work in conjunction with ESF-12 to coordinate repairs of roadways that run parallel with energy and communication repairs.

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;
- 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.

Support Needed Immediately After a Catastrophic Event

- Immediate request for personnel and equipment through EMAC will be first needed. 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;

ESF 1. Transportation

- Likely be asking for assistance from USN, US Coast Guard and other military support to assist with getting equipment and personnel via air or sea into the coastal areas due to expected road damage and coastal inaccessibility from inland;
- Fuel;
- No capability within ODOT of transporting fuel;
- PPE for responding personnel.

3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for complete DAS CSZ information

Priorities

Upon assessment of available personnel, resources and facilities the primary DAS ESF-1 priorities are:

- Assist in the identification of sources to contract transportation services needed for execution of the ESF-1 mission. These services include:
 - Management of the State Motor Pool
 - Provide facilities lease management and negotiation
 - Provide centralized services
 - Provide Geographic Information Systems (GIS) mapping
 - Provide printing services to State agencies

Assets

- Motor-pool fleet consisting of approximately 100 diverse vehicles including: 4WD trucks, SUVs, and vans;
- Small cache of two way radios;
- Six satellite phones currently housed in the COO Division;
- 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;
- Forklift equipment at surplus warehouse;
- DAS staff includes drivers with CDLs, plumbers, and electricians;
- Some fuel storage at State Motor Pool.

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;
- Tasked with the responsibility of procuring a site suitable to the collection and distribution of donated goods and materials;

ESF 1. Transportation

- 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;
- DAS can augment ODOT vehicles for transportation needs.

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;
- 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 vehicles and 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;
- No capability of transporting fuels stored at the State Motor Pool.

Support Needed Immediately After a Catastrophic Event

- Water , food , shelter and sanitary systems for essential responding employees;
- Electrical power restoration or additional generator capacity;
- Additional trained personnel specializing in accounting, comptroller systems and procurement;
- Additional communications hardware, phones, cell phones, and 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;

3.2.2 Department of Aviation

Priorities

- Oregon Department of Aviation (ODA) can get own facility in Salem up and running quickly;
- ODA would get priorities of airport reestablishment from the State ECC;
- Assess stability and usability of State owned airports to carry out response missions;
 - These assessments can be completed quickly pending 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.

ESF 1. Transportation

- Assess stability and usability of other public use airports to carry out response missions.

Assets

- Oregon Department of Aviation (ODA) administers 28 airports throughout Oregon;
- ODA has contacts with all 97 public use airports, and has knowledge on capabilities of these facilities;
- Can facilitate identification and selection of airport and aircraft for response, but is unable to obligate these assets.
- Coordination with Oregon Department of Energy on obtaining remaining aviation fuel at Oregon airports through an emergency declaration.
- Can provide expertise on airport capabilities and aircraft requirements and capabilities;
- Can provide staff to assess damage at airports and determine their usability (three staff members located in Salem);
- ODA has four 4x4 vehicles, two service vehicles, and limited debris removal ability;
- ODA staff can do site assessments on establishing helicopter landing zones on locations outside of airports (pastures, baseball fields, etc.);
- ODA resources and staff are located exclusively in Salem;
- ODA has radios capable of aviation band, ODOT and OSP equipped radio.

Capabilities

- ODA can coordinate and assist in the establishment of forward staging areas at operational airports that they administer;
- Provide liaison to State ECC to handle aviation issues;
- Coordinates sale of fuel at Cottage Grove, Mulino, and Joseph airports;
- Could coordinate with ODOT to get a mobile repeater, then facilitate the acquisition of an aircraft to be used as an airborne repeater to enhance communications in impact area;
- ODA can provide limited volunteer coordination with the Oregon Pilots Association, AERO program and other aviation related volunteers. ODA conducts training and coordination with volunteers as standard business.

Contacts with private companies

- Aircraft, engineering assistance, fuel repair contacts with private sector;
- ODA has contacts with the heavy lift helicopter consortium (Columbia, HTS, Erickson, Croman);
- Has on their consultant registry contacts with companies to provide airport damage assessment, engineering and repair. These companies are located in Portland, Bend, and Corvallis;
- Contacts with helicopter companies with smaller lift capacity (1,000 lb. lift and less). Approximately 20 helicopters.
- ODA Can provide assessments of airport and runway status for their own operations;

ESF 1. Transportation

- Provide expertise and equipment to assist in emergency airport repairs;
- Facilitate the acquisition of aviation assets in an emergency to support State requirements;
- Coordinate using contracted private sector aviation assets to achieve medical and other priority evacuation;
- Coordinate runway and airport repair;
- Assist ECC in assessment and establishment of State staging areas;
- Provide assistance on air traffic control;
- Provide contact information on private use airports and initiate contact with landowners on allowing use of their property.

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;
- In February Cascadia scenario, heavy lift helicopters are coming out of their yearly winter maintenance cycle and may not be operational, or heavy lift helicopters may be in use in other parts of the world during winter in Oregon;
 - Based on scenario, it is estimated that one or two heavy lift helicopters and approximately 20 smaller private helicopters would be available to be contracted;
- Accessibility to fuel resources will need to be identified;
- ODA has no ability to enter into an emergency contract with private sector, would be reliant on other State agencies to enact a contract;
- Coastal airport survivability, and the ability of some airports being able to handle larger aircraft, ODA feels Tillamook, Newport, Cape Blanco and perhaps Siletz airports are likely to survive;
- No standing contracts or agreements with private sector to utilize their assets in an emergency;
- Loss of phone and internet communications with staff and contracts would impact operations;
- No COOP facility identified;
- Need for flight restrictions to ensure air control safety;
- Weather related challenges based on time of year;
- Complete restoration of damaged airport runway runways would take approximately 70 days, sections of damaged runways could potentially be made operational in a week, depending on access and availability of equipment;
- Due to cost factors, non-federally funded airports could be a loss, and be abandoned if damage is too severe.

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;

ESF 1. Transportation

- Transportation assistance to get to airfields (helicopter or cleared roadways);
- Establishment of helicopter landing zones;
- Crews and equipment to repair damaged runways;
- Communications;
- With the winter planning scenario it is likely that fuel supplies would be at a minimum;
- More aviation assets to provide transportation (primarily rotor);
- Air traffic control.

3.2.3 Department of Corrections

Priorities

- First priority for all Oregon DOC facilities is to make themselves and their facilities whole and functional first. No assistance will be available to the response effort until this is complete (keep public safe by ensuring inmates stay inside);
 - Facilities are contained and able to get up to operational status without outside assistance
 - May take one day to one week (or longer?) to get “whole” before they can help State and accept mission assignments
- Must clear facility access paths and roads on site before they can even get to ingress/egress roads;
- Can take State mission assignments after prisons are secure and “whole” again;

Capabilities

- Provide Central Distribution Center (CDC) as possible repository for national stockpile operations;
- Each DOC facility has medical personnel to help injured at the facilities;
 - Basic medical needs of inmates & staff are met on site at each facility
- Clean-up crews (debris removal);
- Fire suppression assistance (wildland);
- DOC can supply trained inmate flaggers;
- Can provide temporary housing (Fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing
- Provide equipment and operators;
 - Evacuations (moving people)
 - Trucks, bulldozers, other heavy equipment;
- Can possibly augment response with DOC fuel supplies;

Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations;
 - Semi-trucks (sleepers)
 - Also have refrigeration & dry good trucks
 - Vehicles have manual fuel pumps on board
 - Some earthmoving equipment (bulldozers, dump trucks)
 - Staff at every facility have CDLs
 - Trained forklift operators (staff and inmates)
 - Inmate buses and passenger vans (some with handicap lift ramp capability)
- Approximately 143,000 gallons of diesel stored at central processing location;
- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Limited skill levels on inmate crews;
 - Down tree cleanup & debris cleanup
 - Chainsaw brigade
 - Flaggers
 - Maintenance
 - Mechanics
- Plumbing, carpentry and electricity (inmates);
 - Though felons cannot hold professional licenses, they can perform these duties with supervision
 - Assist journeyman and licensed professionals – inmates trained to this level
- ODF wildfire assistance camp;
 - Crews no longer in use since 2011;
 - Equipment and “mobile camp” still exists and could be utilized.
- Fire crews (can be deployed with responders & under supervision);
 - Trained to live in fire response environment
 - Have own resources / supplies with them
- Two Structural engineers on contract (one in south part of Oregon, one in northern);
- Certified tactical team / WMD (one in Oregon);
 - Specialty team (18 operators per team)
- Staging Areas could be located outside on DOC properties;
- Mobile Kitchen (Food prep for crews / personnel / housing);
 - USAR team support (at base camps)

ESF 1. Transportation

- Fire team support (at base camps)
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death
 - Peer counseling
 - Family death
 - CSIM counselors (ESS group) have lawyer/client privileges
 - Could be used in State ECC and other facilities for responder staff members
- Gang Task Force (could be tasked by State and used for security);
 - Not prepared for riot-type situations
 - Can be deputized to function as law enforcement
 - Can provide security for firefighters and EMS
- ODC is self-sustaining for approx. 14 days (similar for all facilities);
 - Stores of salt, gravel, etc., to maintain their properties kept on site at prisons (but ingress/egress away from DOC facilities would need ESF #1 assistance)
 - Prisons keep food supplies for four days
- DOC personnel are trained to be deployed to other DOC facilities;
- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities
- DOC Facilities have generators and back-up fuel;
- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond
 - Very comprehensive plans for all scenarios
 - Plans exercised (and plans activated for many other scenarios routinely)

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;

DOC can go two to three days (realistically, at best) without staff relief for their own facilities;

- Possibility some of DOC staff will walk off job in this event to care for families
- DOC will be short staffed immediately after any event like this and may initially need assistance with their own priorities
- Ingress/egress to DOC facilities west of the Cascade Range.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams;

3.2.4 Department of Energy

The Oregon Department of Energy (ODOE) is responsible for planning, preparedness, response, and recovery from petroleum disruptions (ORS 176), liquefied natural gas (LNG) mishaps (496), and radiological emergencies (496).

Priorities

- First priority is ensuring life and safety of personnel and ensuring offices are safe for work;
- Activate Agency Emergency Operations Center;
- Provide liaison to State ECC when activated;
- Rapid assessment of fuel, LNG, and radiological impacts in the State following the event;

Petroleum Program:

- Immediate assessment of fuel storage facilities and delivery systems – Statewide.
- If needed, activate the **Oregon Petroleum Contingency Plan** to direct the State's overall response to fuel emergencies with potential impacts to Oregon. This includes providing emergency notifications, assessing impacts and issuing fuel conservation measures to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.
- If needed, activate a State-wide fuel allocation program prioritizing fuel requests to provide resources to:

Tier 1 – Emergency Services Sector – county emergency management agencies and organizations performing lifesaving functions;

- Law Enforcement
 - Fire Service / Search & Rescue
 - Medical Services (Ambulance, Air Transport, Hospitals)
- ODOE will work with and rely on the expertise and assessments of each county emergency management agency to determine fuel needs for their respective jurisdictions.

ESF 1. Transportation

Tier 2 – Essential Services Sector –State agencies and organizations supporting local response efforts and performing critical functions to restore Oregon’s fuel supply and distribution system and other critical infrastructure. Tier 2 involves the state’s 13 Emergency Support Functions (ESFs);

- ODOE will work with and rely on the expertise and assessments of each ESF lead State agency to determine fuel needs for their respective sector(s).

Tier 3 –Community Hardship - Cities and Counties experiencing hardships caused by fuel shortages;

- Emergency fuel requests from communities will be reviewed by ODOE on a case-by-case basis. Approval will depend on fuel availability and event conditions.

LNG Program:

- Immediate assessment of LNG terminal and LNG waterway transit corridor – Coos County.
- Immediate assessment of pipeline systems transferring product to market – Douglas County, Jackson County, and Klamath County.
- If needed, activate the **Oregon State LNG Emergency Response Plan** to direct the State’s overall response to LNG emergencies impacting Oregon. This includes providing emergency notifications, assessing impacts and issuing protective actions to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.

Radiological Program:

- Immediate assessment of fixed nuclear facilities and eastern Oregon communities within 50 miles of the Hanford Nuclear Reservation in southeastern Washington – Morrow and Umatilla counties.
- Immediate assessment of radioactive material shipments on Oregon highways.
- If needed, activate **Oregon’s Nuclear Emergency Response Plan** to direct the State’s overall response to radiological emergencies impacting Oregon. This includes providing emergency notifications, assessing impacts and issuing protective actions to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.

Assets

- ODOE operates an agency Emergency Operations Center (EOC) in Salem. The agency EOC serves as the State-wide coordination point for ODOE emergency response activities. ODOE provides a liaison to the State Emergency Coordination Center (ECC) when activated. ODOE maintains six 24/7 duty officers;
- Maintains WebEOC to communicate, share real-time information with federal, State, local, and industry response partners, coordinate response actions, and manage overall emergency operations;
- Maintains an established database containing fuel consumption figures, key contacts, and pre-designated emergency fueling locations for the State’s emergency services and essential services sectors;

ESF 1. Transportation

- Maintains database of fixed nuclear facilities, processing plants, and other radiological facilities on the Hanford Nuclear Reservation;
- Maintains emergency response plans to direct the State's overall response to petroleum, LNG, and nuclear emergencies to ensure the protection of public health and safety of Oregonians. Plans include:
 - Oregon Petroleum Contingency Plan – works to overcome possible threats to the availability of fuel resources necessary to maintain essential services and transportation throughout the State.
 - Oregon State LNG Emergency Response Plan – works to overcome possible threats to the safe transport, storage, and liquefying/regasification of LNG in Oregon.
 - Oregon Nuclear Emergency Response Plan – works to overcome possible threats to eastern Oregon residents and the agricultural products in the Pacific Northwest as a result of a radioactive materials release from fixed nuclear facility incidents in southeast Washington.
- Maintains the Fuel Allocation Program designed to ensure emergency fuel to priority users performing lifesaving functions, restoring Oregon's critical infrastructure and preventing community hardships;
- Depending on the event and as resources allow, ODOE can provide responders to local Emergency Operations Centers for the duration of the emergency.

Capabilities

- ODOE is responsible for ensuring State and local emergency response organizations are trained and prepared to respond to petroleum, LNG, and radiological emergencies;
- Assess petroleum, LNG, and radiological facility and system damage, determine and issue protective actions to Oregonians, and monitor industry recovery efforts;
- May deploy ODOE responders as needed to local emergency operations centers to provide technical assistance and/or public information support;
- During a petroleum shortage, LNG incident, or nuclear incident, ODOE will respond to the Oregon State Emergency Coordination Center (ECC) when activated, to serve as the principal liaison between the State and industry experts;
- Request federal and military assistance as appropriate when severe or long-term petroleum, LNG, and/or nuclear events exhaust State resources and Oregon's ability to recover rapidly from an emergency situation. As lead State agency for ESF 12, ODOE works with the U.S. Department of Energy (USDOE – lead federal ESF-12) to request and coordinate the delivery of supplies, equipment and systems, and personnel to support Oregon's recovery efforts;

Petroleum Program – assistance includes obtaining refined petroleum products, assistance in fuel delivery, establishing portable fueling locations, obtaining generators to allow petroleum terminals and pipeline companies to assess damages and restart facilities and systems with minimal delay, and other assistance as appropriate.

ESF 1. Transportation

LNG Program – assistance includes providing response teams to track, detect, and clean-up LNG spills and leaks, support evacuations, and other assistance as appropriate.

Nuclear Program - assistance includes providing radiological monitoring teams to collect air, water, soil, vegetation, and milk samples to determine the extent of radiation contamination in affected areas, support in laboratory analysis, and other assistance as appropriate.

- ODOE can advise the Governor to request the federal government to waive a fuel or fuel additive requirement if doing so will alleviate the fuel supply crisis;
 - The U.S. Environmental Protection Agency (EPA) with the concurrence of USDOE may temporarily waive a fuel or fuel additive requirement under the Clean Air Act Section 211(C)(4)(C). A fuels waiver can be issued only when the criteria specified in the clean Air Act have been met and apply to gasoline and diesel fuel only.
- ODOE can provide a copy of an Oregon emergency declaration to the Federal Motor Carrier Safety Administration (FMCSA) which automatically lifts driver hour requirements to ensure fuel deliveries proceed without delay to ensure public health and safety;
- Coordinate the delivery of fuel to emergency and essential service providers as per the Oregon Petroleum Contingency Plan;
- Coordinate with the Oregon Department of Transportation to promote mobility conservation measures for the public during fuel emergencies to reduce fuel consumption by motorists;
- Coordinate with the Oregon Department of Justice to encourage Oregonians report possible cases of price gouging or price fixing at the pumps.

Catastrophic Event Operational Challenges

- Worker Safety - 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;
- Petroleum Supply and Distribution System Constraints –Oregon has no internal crude resources or refining capabilities in the State. Oregon imports 100 percent of the refined petroleum products from sources outside of the State. More than 90 percent of refined petroleum products used in Oregon come from four refineries in the Puget Sound area of Washington State. Seventy five percent of these products are transported by pipeline traveling 230 miles from the refineries to Oregon's petroleum distribution terminals located at the Port of Portland. Tanker vessels deliver the remaining fuel to the Port of Portland. Oregon also receives limited product in eastern Oregon from a Pasco, Washington terminal as well as limited product from Chico, California to southern Oregon communities.

Oregon is extremely vulnerable to severe or long term petroleum supply and distribution system disruption and damage. Located at the end of a pipeline with no alternative oil source in State or easily accessible source from neighboring states,

ESF 1. Transportation

Oregon will experience the supply pinch before states with internal crude supply and refining capabilities, and likely need to implement fuel allocation.

- Interdependencies - Electrical power, communications capabilities, and viable transportation corridors are required to support fuel deliveries throughout the State.

Support Needed Immediately Following Catastrophic Event

- Access to adequate fuel inventory from outside the region;
- Assess and inventory of usable stored fuel supplies at petroleum terminals in Portland and Eugene. This includes available supplies at State motor pools, prisons, and other fleet services;
- Aerial (fixed wing and rotor) support for damage assessment of facilities and associated pipeline systems, as well as the resupply and insertion of response teams.

3.2.5 Oregon Department of Forestry

Priorities

- Ensure safety of personnel and facilities;
- Assessment of State forestry issues as a result of the incident;
- Coordinate with ODOT for ESF 1 transportation needs of forestry assets following incident.

Assets

- ODF is administered via three operational areas in the State: Eastern Area, Southern Area and North Western Area;
 - Each area has 5 districts.
 - Each ODF district has a communications center. The centers are not operational at all time. 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.
- ODF has roadway engineers who could 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.

ESF 1. Transportation

- 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;
- ODF supports three, 33 person Type 1 incident management teams qualified through the National Wildfire Coordination Group (NWCG). Type 1 teams operate on a rotational system through the fire season. Type 1 teams include mobile kitchen, showers, and operational equipment;
- Incident management teams are staffed with ODF employees across the State plus one Fire Service - structural liaison for each team;
- Several days' worth of fuel for generators to sustain the three Incident Management Teams;
- GIS analysis and support;
 - Can provide assistance on determining access to impacted areas via forest roadway networks.
- Radio / communications trailers;
- Numerous 4WD vehicles distributed Statewide;
- Aircraft – Rotary and fixed-wing. Some ODF air assets are via contract with aviation companies;
- Debris removal equipment;
- Dozers, earth moving and road building equipment;
- Three water trailers that carry one thousand gallons of potable water, each;
- Wildland Fire Engines, water tenders and personnel for emergency response;
- MOU's with all local fire jurisdictions;
- MOU's with federal firefighting jurisdiction; Forest Service, BLM (Bureau of Land Management), BIA (Bureau of Indian Affairs), National Parks, US Fish and Wildlife Service, National Wildfire System for support;
- Look-out towers with cameras located throughout the State in forested areas;

Capabilities

- Can provide equipment and personnel to assist with roadway debris removal;
- One of ODFs primary tasks will be in opening up forest road systems;
- Can provide a network of alternate road systems via forest roadways;
- Private sector contracts and relationships with private forest land owners enables access to private logging roads and coordinating the acquisition of private logging equipment, for road clearance;
- ODF has private sector contracts for aircraft (from out of State);
- Provide logistical support for responders;
- ODF has equipment and personnel trained for road clearing and road construction (gravel roads);
- ODF will work with County Sheriffs and ODOT to establish evacuation routes;
- Maintain and manage forest roads on State owned lands;

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 road building and aerial missions if normal communication systems are down.

Support Needed Immediately After A Catastrophic Event

- 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.

3.2.6 Oregon Military Department

Guard units are trained and equipped to aid in traffic control, resource distribution, potable water transportation, and providing aerial surveillance of a disaster area. The Guard may also assist in search and rescue, lifesaving and air ambulance missions.

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Recall of personnel;
- Identify fuel sources;
- The Oregon National Guard may engage in immediate response lifesaving response actions for up to 72 hours at individual unit commander's decision;
- Re-establish Statewide air traffic control;
- 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

- UH-60 Blackhawk helicopters based in Salem;
 - Medical evacuation capability.
- CH-47 heavy lift helicopters based in Pendleton;
- C-23 Sherpa fixed wing transport;

ESF 1. Transportation

- 141 BSB (Brigade Support Battalion) w/ five or six forward support companies throughout the State, two located east of the Cascade Range;
 - Based on scenario it is likely that forward support companies in Bend, Springfield and Pendleton likely be able to respond.
 - Transportation assets include HMMWV ("Humvee"), LMTV Light Utility trucks, HMTV 2.5 ton and 5 ton heavy utility trucks. **numbers of assets outside of impact zone to be provided**
- Additional transportation assets in storage are located at Biak Training Center in Redmond ;
- Security Forces:
 - Quick Response Force (QRF) (2/3 based in Portland Metro area, 1/3 in Klamath Falls).
 - Rapid Response Force (RRF) (Eugene/Springfield area), utilized for convoy security. Designed response time is 36 hours.
- Heavy road clearance/ construction equipment is available-located in Dallas, Albany, Astoria, Biak;
- Significant maintenance facilities located in Salem, Lebanon, Springfield, Camp Withicum, Biak;
- Air traffic control assistance/remote airfield management is available, stationed at Portland and Klamath Falls;
- US Army Reserve Units in State now available to support Oregon National Guard.

Capabilities

- Transportation of SNS, operations and relief supplies and equipment, fuel, personnel via roadways;
- Aerial ambulance, reconnaissance, transportation of operations and relief supplies and equipment via fixed wing and rotary aircraft;
- Convoy security;
- Provide security for transportation missions;
- Engineering and debris clearance on roadways/airfields;
- Establish and support air traffic control operations;
- Contracting assistance;
- OMD maintenance facilities and personnel.

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.

ESF 1. Transportation

- Accessibility to fuel resources;
- Inability of OMD trucks to use civilian trailer truck hitches;
- Limited petroleum storage.

Support Needed Immediately After A Catastrophic Event

- Diesel and gasoline fuels, to include transit and storage of fuels;
- Personnel to support ESF-1 operations;
- Additional vehicles and operators;
- Heavy lift rotary aircraft;
- Fixed wing aircraft;
- Additional engineering assistance.

3.2.7 Department of State Lands

Priorities

- First priority is ensuring life and safety of DSL personnel and ensuring offices are safe for work;
- Provide liaison to state ECC;
- Provide approvals for the use of State lands as necessary for response and recovery.

Assets

- Have three offices, Salem (80 on staff), Bend (10 staff) and South Slough, Coos Bay (15 staff);
- Natural resource specialists on staff;
- Have scientists on DSL Staff that are linked with the Pacific Tsunami Warning Center;
- Can provide GIS analysis and mapping capabilities. Three specialists that can assist as needed with GIS issues and information;
- Have a small fleet of vehicles in Salem - two 4WD vehicles, three sedans and one cargo van;
- Network of instruments in the South Slough that record water surface elevation and other water quality and meteorological parameters;
- Bend office has six 4WD vehicles;
- Have one boat located in Salem with trailer used to do surveys of property along navigable waterways and survey docks;
- DSL administrative office located in the town of Charleston (SE of Coos Bay on the South Slough);
- South Slough DSL office vehicles:
 - Two 4WD vehicles.
 - A one ton tilt bed equipped with tandem rear wheels and a bumper mounted winch (located at the SSNERR maintenance facility).
 - A half ton conventional pickup with four traction tires. (located on the OIMB campus).

ESF 1. Transportation

- We have about seven VHF radios with an assigned frequency.
- Two twin axle utility trailers and a 14 HP 4WD diesel tractor equipped with a small front bucket and a three point trailer hitch and power takeoff. This is a smallish “landscape” tractor that fits on the trailers mentioned above.
- South Slough DSL office boats:
 - Smokercraft 18 foot flat bottomed skiff with trailer and steering console. Electric start four stroke 40 HP located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
 - Alumaweld 16 foot semi vee hull with trailer and steering console. Electric start four stroke 55 HP located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
 - Valco 16 foot lightweight flat bottom “jon boat” with trailer and 20 HP pull start (location varies between OIMB and SSNERR Interpretive center).
 - Valco 14 foot lightweight flat bottom “jon boat” without trailer and 15 HP pull start outboard .

Human powered craft including:

- 22’ fiberglass eight passenger canoe with trailer.
- Two or three conventional 17’ canoes (three passenger).
- Three or four Roto molded Kayaks (single passenger).
- Trailer designed to carry four to six paddle craft .
- All human powered craft are located at the SSNERR Maintenance facility (outside of the tsunami inundation zone).
- Modified the water supply system at SSNERR’s interpretive center to store 2,000 gallons of potable water in two tanks and have another 1,000 gallon potable water storage tank at the Spruce ranch complex near the maintenance facility;
- DSL has access easement agreements with private property owners to gain access to state lands;
- Maintains a database of all State-owned lands.

Capabilities

- Coordinate with the Oregon Department of Transportation when State lands are affected by a disaster or event, including navigable waterways;
- DSL can provide information relevant to wetlands, State-owned forestland and easements that exist in Oregon, as well as other necessary information consistent with the mission of Department of State Lands;
- Provides pre-event tsunami awareness training;
- Administers navigable waterways up to ordinary high water, coast areas – submerged and submersible lands up to three miles out;
- Manages State owned rangeland and forest lands for income;
- Forest land is managed by the Department of Forestry and timber sales are used to fund education;

ESF 1. Transportation

- Through the State debris removal plan, tasked with providing State lands for stock piling debris;
- As manager of State owned properties, can use State property to establish staging areas;
- Issue rights of way and special use permits for the Army Corps of Engineers, ODOT and other agencies that require access to damaged areas within State lands in Oregon;
- Can assist in the coordination of debris removal;
- Can implement emergency authorization process to allow for emergency removal of debris from waterways without going through the permitting process;
- All staff can be moved to areas of need regardless of area office they are primarily assigned to;
- Staff can work virtually if offices are damaged and unsafe;
- DSL is a regulatory – land management agency and would provide emergency authorization when and where needed;
- DSL has contracts for legal services, real estate services – appraisals, audit services, technical and natural resource services.

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.
- Accessibility to fuel resources;
- DSL does not have mobile operations capabilities. Staff can work from anywhere if there is power and communication connectivity;
- All communications depend on land line, cell phone, and computer e-mail capabilities;
- No capabilities to sustain a crew without a living area, food, water and power;
- Environmental laws that may hinder access to and through State owned lands and water ways.

Support Needed Immediately After a Catastrophic Event

- Fuel for vehicles;
- Getting staff where they need to be due to roadways being compromised;
- Need electricity/telecommunications/internet access for operational capabilities and access to computer databases necessary for operations.

3.2.8 Oregon State Police

Priorities

- Protect people, property and natural resources in the State;
- Assist in keeping highways and roads open primarily Interstate and State highways, for evacuation, emergency response and commerce.

ESF 1. Transportation

Assets

- Have a cooperative agreement with ODOT, in OSP EOP, to support each other;
- OSP operates two Regional Dispatch Centers (RDC). RDC locations are: Salem (northern) and Medford (southern).
 - If repeater sites are functioning on generator power, communication capability will last for up to a week before fuel is needed for the generators.
- Key OSP offices have satellite phones;
- Some OSP Troopers are Ham operators; however this communication isn't coordinated or used in a functional capacity;
- OSP COOP plans call for regional command staff to respond to local emergency operations centers when events of this magnitude happen;
- Some OSP facilities are equipped with generators and are capable of sustaining power with fuel resupply;
- State is broken up into 3 regions, with each region capable of carrying out OSP operations independently.

Capabilities

- Develop and maintain a liaison between local, state and federal law enforcement agencies in Oregon;
- Because OSP is often first onscene during an emergency, it may act as an initial incident command agency until the local incident command agency is onscene, or if no local agency is available;
- OSP Troopers at a disaster scene may provide limited damage assessment as their duties permit. In addition to enforcement and specific services, OSP provides for the protection of life and property, traffic control, crowd control, communications, emergency first aid, site security, and security for vital State facilities and critical infrastructure. Generally, law enforcement within the disaster/emergency area remains the responsibility of local authorities along established jurisdictional boundaries, unless State assistance is requested or required by statute.
- OSP maintains a presence in the State ECC when it is activated;
- Assist with keeping roads open;
- Assist with damage assessments, by patrol officers and aircraft if possible;
- Assist local communities as much as capable;
- Assist with evacuations;
- Peace keeping missions on the roadways;
- Peace keeping missions in the rest areas where evacuees tend to congregate;
- Highway and roadway safety;
- Law enforcement jurisdiction over State roads, parks, lands & property;
- Assist with search and rescue and lifesaving evacuations;
- Mutual aid agreements with Washington, Idaho, California, and Nevada where OSP can ask for emergency mutual aid within 50 air miles. This would be handled as a verbal emergency request;

ESF 1. Transportation

- Have cooperative policing agreements / MOU's, in State with almost all 36 counties. There are written agreements; however it has been years since they have been renewed and the agency now functions on a verbal agreement;
- Provide safety and security to ODOT crews if needed;
- Event scenario provides for possible vehicle accidents during this incident. OSP will maintain law and order and assist with accident investigations and providing safety / security to ODOT as well as medical personnel;
- Weather permitting, can provide light reconnaissance with aircraft providing that there are runways to take off from and land on. Planes are stored in the Portland area;
- Provide personnel on-scene to assist with road closures, traffic redirection and other activities in line with OSP's mission functions.
- Limited search and rescue with boats;
- Can provide security / escort to supply convoys enroute to the impacted areas;
- Can house responders at Camp Rilea (Clatsop County). Additionally responders can billet at the public safety academy (DPSST-Salem);
- Some key personnel with assigned home-based patrol vehicles.

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;
- Employees may be isolated and unable to respond due to road / bridge damage;
- Accessibility to fuel resources;
 - Fuel resources can last for approximately 4 days.
- Operations dependent on accessibility of roadways;
- OSP Coastal offices will likely be rendered unusable;
- Several coastal offices are located on docks which will be impacted by this event;
- Radio and repeater sites are supplied with generator back-up power and will run out of fuel within three to four days.

Support Needed Immediately After a Catastrophic Event

- Fuel – OSP is commercial fueling dependent;
 - No manual fuel pumping capabilities if power is down.
- Communications between facilities and responders will be an issue if repeaters are down;
- Staff unable to report to work, and fatigue of responders will force need for additional patrol staff and support;
- OSP doesn't have any food or water beyond employee kits (staff is encouraged to have emergency plans for their homes and families as well as food for at least seven days).

3.3 Adjunct Agencies

3.3.1 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, which segments that 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.

ESF 1. Transportation

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.

4 ESF-1 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Transportation assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

ODOT will provide a representative to the ECC who will be the primary point of contact for all Transportation needs. ODOT maintains an Agency Operations Center (AOC) off site to specifically manage and coordinate their resources.

4.1 Objective

Provide transportation for response priority objectives, including the evacuation of people and animals, and the delivery of vital response personnel, equipment, and services into the affected areas.

4.2 Challenges

- Number of significantly damaged and blocked roads, railways, air and seaports will overwhelm the limited number of engineers, inspectors and crews to conduct assessments and inspections.
- Significant damage and debris will limit access to conduct assessments and repair.

4.3 Assumptions

- Damage from the initial earthquake and tsunami will destroy most of HWY 101 and other roads that provide access to the coast;
- Access and supporting infrastructure to/from airports will be a limiting factor for aerial delivery of resources;

ESF 1. Transportation

- Aftershocks will cause a significant amount of additional damage during the response;
- Tsunami threat from aftershocks and floating debris will limit access to coastal communities;
- Fuel requirements for assessment and repair crews will exceed local capability;
- Local, State and Federal capabilities and resources will be overwhelmed by the magnitude of the incident;
- Response resources in the impacted area will have limited capability to function and some impacted areas will be isolated;
- Resources outside of the impacted 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 land line/network communications/power will limit ability Statewide of providing local situational awareness.

4.4 ESF 1 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Damage assessment capability for the transportation sector. (Road, Air, Rail, Sea)	▪ Aerial platforms/GIS support to conduct visual inspections to key infrastructure sites. ▪ Tactical communications support to coordinate transportation assessments/repair. ▪ Certified inspectors to conduct air, road, rail and seaport inspections. ▪ Under bridge inspection equipment.
Availability of crews and equipment to repair and re-direct critical transportation nodes.	▪ Establish Transportation task force to coordinate ▪ Priorities and requirements. ▪ Life support and facilities for repair crews.
Air space management capability	▪ Air Traffic Control Support. ▪ Tactical Communications to coordinate air operations.
Limited access to the impacted area	▪ Security and safety for repair and assessment teams. ▪ Debris clearance to provide access to impacted area. ▪ Waivers for driver restrictions and oversize vehicles on public roads.
Bulk fuel storage and distribution for transportation repair teams	▪ Fuel storage and distribution points. ▪ Security for distribution points and personnel. ▪ Electrical power for fuel distribution points.

4.5 Concept of Operations

Hazard analysis indicates an earthquake and subsequent tsunami will disrupt the transportation network into and within the Statewide impacted areas and the surrounding areas. Transportation into and within impacted areas will be challenging. Transporting heavy equipment and other resources will require unique solutions. Although the primary attention will focus on the road networks, it's likely to initially anticipate access only by air or by riverine /oceanic waterways into the disaster areas.

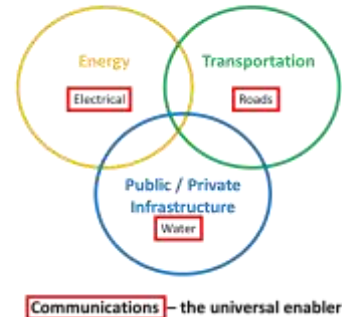
ESF-1 functions include but are not limited to:

- Immediately recommending the closure of all ground, water, and air transportation routes into the impacted areas until engineers and/or inspectors complete:
- Assessment, clearance, and structural evaluation roads and bridges for use by emergency vehicles to include load limitations. Priorities for bridges and roads assessments are for identified ODOT lifeline routes.
Primary/Alternate Lifeline Routes will consist of:
 - Interstate highways
 - Primary roads
 - Secondary roads
- Major routes to hospitals and other critical facilities as prioritized by ESF 1 responding agencies.
- Assessment and clearance of ports, terminals and waterways for use.
- Assessment, structural evaluation, and clearance of airport runways and facilities, including commercial and available private airports, to determine the availability for use by different categories and class of aircraft.
- Coordination with the rail industry to assess railway damage into and within the impacted area.
- In coordination with ESF-13, recommend the limitation and restriction of all transportation routes into and out of the impacted areas for emergency response use only.
- Coordination with county emergency managers and the other ESFs to determine transportation assets that meet the needs and requirements for each impacted area.
- Coordination with county emergency managers and ESF 7 on prioritizing transportation access into impacted areas where resources (equipment, supplies, personnel, etc.) will be received and later deployed within the area.
 - These locations may be locations identified in SA1 Mass Commodities Annex of Oregon EOP, state owned properties, roadways, waterways, airports, and heliports within the impacted areas.
 - These locations could be situational dependent and could change due to the severity of the earthquake.

ESF 1. Transportation

- Coordination with County and local public works, state agencies with road repair capabilities, federal partners and the private sector in prioritization and repair of damaged transportation routes.
- Coordination with ESF -2, ESF-3, ESF-12 on prioritizing areas where Transportation, public works, communications and power infrastructure can be repaired in tandem.

Critical Infrastructure Prioritization



ESF-1 will coordinate and provide transportation within the categories noted below:

Ground transportation Coordination:

ESF 1 will coordinate with county emergency management and responsible agencies the need and use of long-haul trailers, buses, vans, four-wheel drive vehicles, tractors, and railroad transport (flatbeds, boxcars, etc.) to transport equipment, food, supplies, and emergency workers with all ESFs.

Waterway Coordination:

Coordinate the need, acquisition and use of agency watercraft to assist with response and recovery.

Work with local communities to restore port facilities to be able to receive relief supplies from sea.

Request the USCG to control boat traffic into the ports and surrounding waterways.

Aerial Coordination:

ESF 1 will coordinate aerial resources for visible damage information to quickly assess the situation to determine:

1. The extent and nature of the disaster's effects.
2. The general condition of lifelines and critical facilities.
3. The observed damage information needed for bridge engineering inspections, input for ingress and egress analysis, medical, and public safety.

ESF-1 will identify fixed and rotary aircraft shortfalls and needs to meet response missions across all ESFs and will coordinate with other federal and state sources and private contractors to maintain a listing of potential sources for aerial support. The emergency operations necessary for the performance of this function include but are not limited to:

- ESF 1 responding agencies activate ESF 1 Transportation Plans through their AOCs;
- State ECC receives and coordinates county and State agency transportation requirements (personnel, equipment) to begin establishment of lifeline routes;

ESF 1. Transportation

- Primary/Alternate Lifeline Routes are established to relieve impacted areas;
- Coordinate with and request ESF-13 source and provide personnel to accompany ESF 1 responders to maintain security;
- Coordinate with appropriate agencies to determine the damage status and the operability of airports and ports;
- Validate resource shortfalls and obtain necessary resources;
- Coordination with Federal partners.

5 Supporting Documents

- National Response Framework, ESF 1 – Transportation
- County ESF 1 Annexes
- ODOT Emergency Operations Plan (EOP)
- ODOT First Responder Guide to Highway Incident Response
- ODOT Employee and Family Disaster Preparedness Guide

6 Appendices

None at this time.

2

Cascadia Subduction Zone Catastrophic Annex

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

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ESF 2. Communications

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ESF 2 Tasked Agencies	
Primary Agencies	Oregon Emergency Management (OEM) Public Utility Commission (PUC)
Supporting Agencies	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)
Adjunct Agencies	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.

ESF 2. Communications

- 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

- Primary responsibility is to facilitate the restoration of energy utilities;
- Act as liaison between the State and the utility companies to coordinate restoration of energy and telecommunications utility delivery systems, in the most efficient manner;
- Facilitate communication with affected utility companies.

Assets

OPUC- Safety, Reliability and Security Division (SRSD)

- Coordination and contact information of:
 - Five investor owned utilities in electric and natural gas industries.
 - 33 publicly owned utilities with regards to municipal operations, public utility districts and electric rural cooperatives.
- Three Professional Engineers within structural, mechanical and electrical engineering disciplines;
- Three Operations Managers, with expertise in: technical, construction and maintenance environments;
- Four Certified Pipeline Inspectors;
- All OPUC SRSD field staff have assigned DAS 4WD vehicles that are home garaged. Field staff can respond from home if needed;

ESF 2. Communications

- OPUC currently has seven field inspectors;
- PPE supplies for field staff. Supplies carried by each inspector.

Capabilities

- Regulates the State's investor owned electric, natural gas and telephone utilities, and certain water companies;
- Ensure that utilities and companies have adequate emergency preparedness plans in place;
- During emergencies, disasters, and when the State ECC is activated, the PUC serves as the State's liaison to the utilities to exchange information and determine status of impacted systems;
- Provide assistance to ensure public utilities and PUC regulated entities can effectively restore electric and natural gas resources following a disaster which impact interdependent sectors;
- Ensure public utilities and PUC regulated entities mobilize and employ the necessary resources available in accordance with emergency plans, as applicable;
- Work 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;
- Interface with ODOT in securing access into the State with external mutual aid response equipment and personnel to those utilities to ensure compliance with port of entry regulations, and weight mile taxing authorities and permits for heavy loads coming into the State;
- 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;
- OPUC has the authority to cite unsafe acts;
- Can provide accurate damage assessments to energy and telecommunications infrastructure;
- Teams are capable of maintaining a 12 hours on – 12 hours off rotation schedule for at least two to three weeks in duration;
- Have MOU with Oregon Department of Energy defining responsibilities with regard to electrical and natural gas energy utilities and petroleum fuel resources.

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;
- Agency has stand-alone information technology systems (not a part of the State IT infrastructure) and has no redundant capabilities or interoperability with the State;
- No stand-by generators for agency office. Communications and information technology systems will be unavailable when the power goes down;

ESF 2. Communications

- 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.
- Additional trained 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;
- 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, sSate 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;
 - 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;

ESF 2. Communications

- 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;
- 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;

ESF 2. Communications

- 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 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.

ESF 2. Communications

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;
- 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;

ESF 2. Communications

- Have COOP and BCP that addresses primary facilities and capabilities.

Capabilities

- ODF is capable of setting up interoperable communications anywhere;
- 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;

ESF 2. Communications

- 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;

ESF 2. Communications

- 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;
- 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;

ESF 2. Communications

- 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.
- 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

ESF 2. Communications

- 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;
- 41st 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.

ESF 2. Communications

- 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

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

Provide watch, warning, and information to Oregon. NWS offices may utilize the National Warning System (NAWAS), 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.

Table ESF 2-2 NWS Forecasting Areas of Responsibility	
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.

ESF 2. Communications

- 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;

ESF 2. Communications

- 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)	■ Aerial Platforms to conduct visual inspections of key communications sites. ■ Tactical Communications among teams to support and coordinate communications assessments and repair.
Limited access to the impacted area for assessment / repair personnel / teams	■ Aerial Platforms to transport assessment teams to key communications sites. ■ Coordination and communications with and between ESF-1 agencies. ■ Safety of responders and repair crews. ■ Debris clearance. ■ Driver restrictions Waiver. ■ Oversize vehicle Waiver.

ESF 2. Communications

Availability of out-of-area crews to provide repair and restoration personnel.	- Establish Communications Restoration TF to assess gaps in readiness for a large-scale event. - Life support and facilities for out of state repair crews. - Expeditious Credential Verification.
Local availability of repair crews and replacement parts.	- Ensure that responders and repair crews have a robust and proven contingency communications plan to muster personnel. - Ensure that repair crews have access to and have enough critical communication repair parts as they are needed. - Establish priorities for restoration efforts.

4.1.4 Concept of Operations

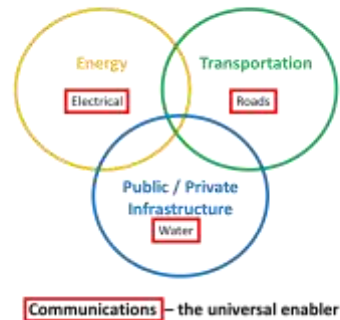
Hazard analysis indicates a catastrophic earthquake will severely disrupt commercial communication services and operational coordination communication to and within the impacted areas.

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 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;

Critical Infrastructure Prioritization



ESF 2. Communications

- 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

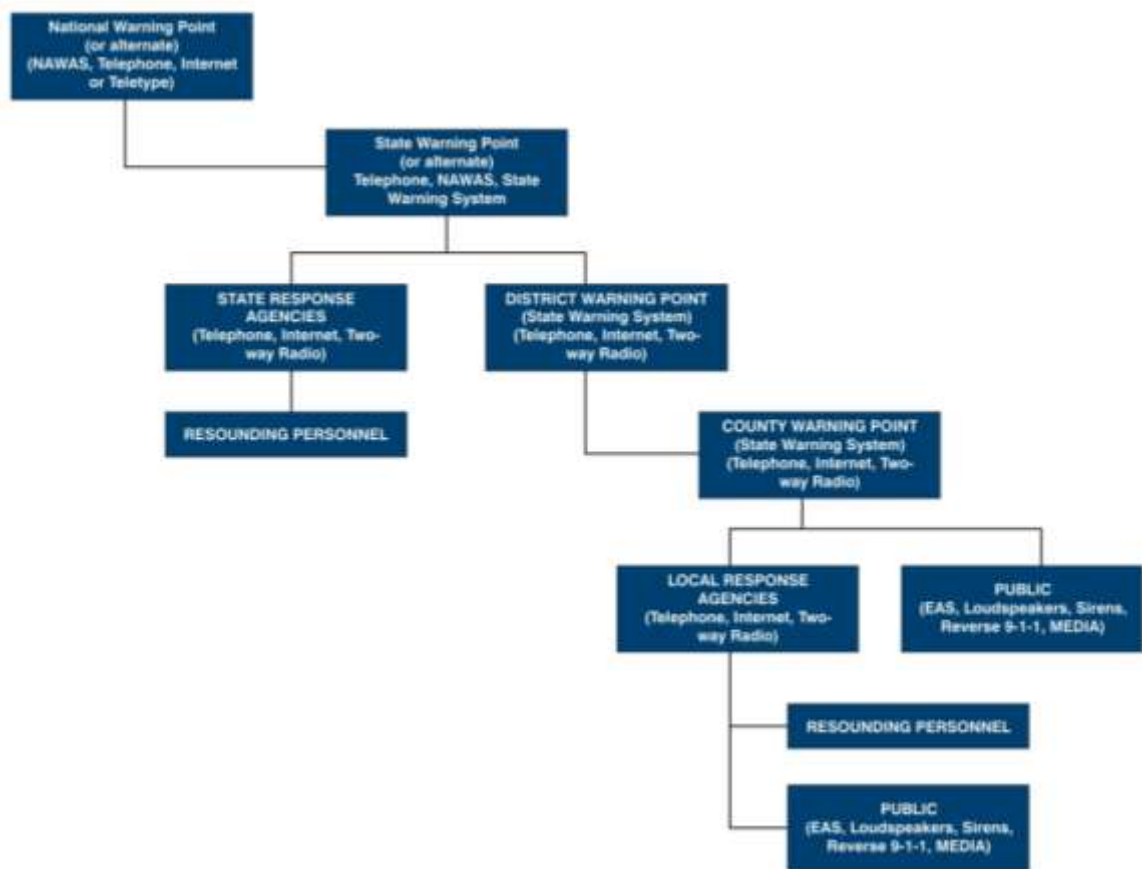
- NAWAS is the primary method of communicating alert and warning messages from national authorities to the State warning point, and from the State warning point to local warning points.
- The telephone may be used to distribute alert and warning information to individual jurisdictions.
- EAS is the primary 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.

ESF 2. Communications

- 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.

Table ESF 2-2 Oregon NAWAS Notifications	
County Warning Point	Alerts these other Warning Points
Benton County	Linn County
Clackamas County	
Clatsop County	

Table ESF 2-2 Oregon NAWAS Notifications	
County Warning Point	Alerts these other Warning Points
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.

ESF 2. Communications

- 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.
- 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

ESF 2. Communications

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.
- 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.

ESF 2. Communications

- 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.

3

Cascadia Subduction Zone Catastrophic Annex

ESF 3 – Public Works and Engineering

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ESF 3. Public Works & Engineering

ESF 3 Tasked Agencies	
Primary Agency	Oregon Department of Transportation (ODOT)
Supporting Agencies	Department of Administrative Services (DAS) Department of Consumer and Business Services (DCBS) Department of Environmental Quality (DEQ) Department of Geology and Mineral Industries (DOGAMI) Oregon Military Department (OMD) Department of State Lands (DSL) Water Resources Department (WRD)
Adjunct Agencies	Oregon Water/Wastewater Agency Response Network (ORWARN)

1 Purpose

Provide public works and engineering assistance to local jurisdictions responding to the effects of a Cascadia Subduction Zone earthquake and resultant tsunami.

2 Scope

ESF- 3 provides pre-damage and post-damage inspection and assessment, technical advice and evaluations, engineering services, construction management and inspection, provision of potable water and provision of emergency power. Other support includes response and recovery actions related to clearance of debris, restoration of critical infrastructure, demolition or stabilization of damaged structures, technical advice and assistance, construction management, contracting, real estate services and damage assessment.

3 Roles and Responsibilities

3.1 Primary Agency

3.1.1 Oregon Department of Transportation

Priorities

- Assess damage to roadways, bridges and tunnels and begin work on all that have been impacted. Can have impact on public works repair due to location of facilities and lines dependent on access. Response becomes recovery as roadways are made accessible and serviceable to get to impacted communities;
- Provide assistance to counties and local municipalities as support. (Oregon Public Works Emergency Response Cooperative Assistance Agreement, a mutual aid agreement signed by 219 State and local public works agencies in Oregon.);
- Identify heavily impacted areas and prioritize their repair;
- Identify and acquire heavy equipment and engineering resources to reach impacted areas;
- Roadway repair priorities: provide an immediate and complete evaluation of 'lifeline' roads. Provide temporary accessibility and repair to make them usable for response and evacuation;

ESF 3. Public Works & Engineering

- Coordinate debris management activities.

Assets

- Public Works Cooperative Assistance Agreement – Statewide (municipal, county and State) agreement;
 - Covers all aspects of public works needs at local and county levels.
 - Assets from local and county levels responding to assist in this event can claim reimbursement. All counties are signatories however not all lower agencies. 219 municipalities are signatories to this agreement.
- Can provide rapid damage assessment with assistance from the Military as well as the Civil Air Patrol to provide aerial reconnaissance and photography;
- Fleet fuel stations located all over the State, at regional and district offices regional. However, ODOT cannot supplement other agencies needs for fuel;
- Agreements with Forest Service and BLM to have access to forest roads for access to heavily damaged areas. Will have to rely on local and county jurisdictions to allow access across private land, potentially through eminent domain;
- ODOT has five regional offices throughout the State responsible for multiple district offices;
- 14 district offices with staff and fleet equipment;
- Pre-identified staging areas for equipment: State Fairgrounds in Salem, large office in Bend, Rest Areas up and down the I-5 corridor are all capable of staging equipment;
- Bend District Office can be used as an alternate AOC for ODOT. All district offices have copies of plans, operation manuals and standard operating procedures to deal with emergencies;
- Technical support branch consisting of: bridge inspectors, other technical specialists, public works support branch, water unit, building inspection, debris management, trucking unit, air transport unit, rail transport unit, water transport;
- Photo / video section provides damage assessment documentation with aerial support from OMD, AERO and CAP;
- Business continuity unit within ODOT AOC;
- Business continuity plans exist with the Department of Motor Vehicles;
- 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;
- ODOT personnel arrive on response with 'go kits' and are prepared to be self-sufficient for a minimum of 96 hours. That includes food, clothing, and whatever personal items that are needed;
- Have MOU's with county public works divisions to provide support;

ESF 3. Public Works & Engineering

- ODOT has multiple bridge engineers, two assigned in every district in the State;
- Two ODOT engineers are trained in structural engineering and are assigned to OSFM USAR teams;
- ODOT Incident Response crews can provide basic hazardous materials response (oil and gas) and traffic control for HAZMAT response.

Capabilities

- Coordinate ESF-1 and ESF 3-related missions in support of the State Emergency Operations Plan;
- 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;
- Maintain liaison with the Oregon Chapter of the Association of General Contractors and construction and equipment rental companies;
- Coordinate with the US Army Corps of Engineers to obtain federal public works and engineering support.
- Work with the Oregon AERO in regard to aviation-related response activities, including the use of State owned airports;
- Provide transportation-related public information and mapping support to the Governor's Office, the Oregon ECC, or the lead State response agency, in addition to the public information and mapping support work done within ODOT, during response and recovery activities;
- Coordinate with the U.S. Department of Transportation Region 10 Regional Emergency Transportation Coordinator (RETCO) or designee, to obtain federal transportation support;
- Work with local road authorities and the Federal Highway Administration (FHWA) to implement the Federal-Aid Highway Emergency Relief (ER) program for federal-aid highways in Oregon.
- Coordinate and control emergency highway traffic regulation in conjunction with the OSP, OMD, and the FHWA.
- Maintain liaison with the Oregon Chapter of the Association of General Contractors and construction and equipment rental companies;
- ODOT provides liaisons with FHA, the Federal Strategic Highway Network (STRAHNET) through DOD, USACE, OMD, and USCG;
- Capable of planning, designing and developing roads, highways, bridges and tunnels. Can and will provide this support to local communities as needed;
- Mapping and GIS capabilities;
- Conduct aerial reconnaissance and photographic missions, as requested, provided resources are available;
- ODOT has up to date 'winter' emergency operations plans that are fairly comprehensive emergency operation plans. These operation plans and the emergency operations tool kit are updated before and after every winter;
- Work with DEQ to ensure environmental issues are taken care of when establishing access to coastal communities with temporary or new roadways;

ESF 3. Public Works & Engineering

- Coordination with ESF 10 on providing traffic control and intelligence for oil and hazardous material issues;
- Work with JIC and County Operations Centers to establish public messaging priorities and locations;
- Provide evacuation and security assistance through use of barricades and signage;
- Work in conjunction with ESF 12 to coordinate repairs of roadways that run parallel with energy and communication repairs.

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;
- 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;
- Coordination and communication with public works agencies and responders will be limited and could present a challenge to an organized response;
- 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.

Support Needed Immediately After a Catastrophic Event

- Immediate request for personnel and equipment through EMAC will be needed. 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 for Astoria, Warrenton, Seaside, Yachats, Cape Perpetua, Coos Bay;
- Likely be asking for assistance from USN, Coast Guard and other military support to assist with getting equipment and personnel via air or sea into the coastal areas due to expected road damage and coastal inaccessibility from inland;
- Fuel;
- No capability within ODOT of transporting fuel;
- PPE for responding personnel.

ESF 3. Public Works & Engineering

3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for additional DAS CSZ information.

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

- Motor-pool fleet consisting of approximately 200-275 diverse vehicles including: 4WD trucks, SUVs, and vans;
- Small cache of two way radios;
- Six satellite phones currently distributed to SDC managers;
- 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;
- Voice Mobile Office kit with a switch, handsets and phone numbers in a box available for emergency use;
- Forklift equipment at surplus warehouse;

ESF 3. Public Works & Engineering

- DAS staff includes drivers with CDLs; DAS Facilities Division has seven journeyman electricians, three HVAC control technicians, and five refrigeration mechanics on staff.
- Some fuel storage at State motor pool, capacity depends on if the tank has just been filled or waiting to be filled;
 - For E-10 and B20, the tanks can get as low as 2,500 gallons each and they are about 15,000 when we bring in a load to fill, sometimes a bit higher. Note: the B-20 and E-10 tanks are below ground and could be susceptible to damage in an earthquake.
 - For E-85, the tank can get as low as 1,200 gallons and a max of 11,000 gallons.
- DAS natural gas fuel system is full as long as the line remains intact, the natural gas fuel system serves as the backup station for the City of Salem bus service – “Cherriot’s”;
- Fleet has one dedicated generator at Fleet and two portable ones. One portable is natural gas powered.

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;
- 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;
- Coordinates salvage operations, adjusts property damage claims and submits those above the retention level to the State's commercial insurers;
- Essential DAS services needed post-incident include:
 - Accounting services;
 - 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;

ESF 3. Public Works & Engineering

- 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 State-owned facilities during or after an incident.

3.2.2 Department of Consumer and Business Services

Department of Consumer & Business Services: The department consists of five operating divisions (Building Codes, Finance and Corporate Securities, Insurance, Oregon OSHA, Workers' Compensation) and three support divisions (Information Management Division, Fiscal and Business Services, Directors Office).

Building Codes Division: Ensures safe building construction by adopting and administering uniform Statewide building codes; provides building code and rule interpretation; assists local government building departments; enforces license, code and permit requirements; certifies inspectors and licensing trade professionals.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Upon request, send liaison to State ECC.

Assets

- The primary facility for the BCD is in West Salem;
- BCD has field offices in Pendleton and in Coquille (Could be impacted by tsunami). Approximately four or five personnel at each location. BCD could reassign some of our field office staff for a short time to supplement staffing. BDC has no ability to house or care for those staff however;
- BCD Inspectors have agency vehicles;
- BCD (in isolated cases) has IGAs with jurisdictions where they provide services on BCD's behalf. Example: In Klamath County, someone is doing prefab construction and shipping those around the State of Oregon. To avoid having to send BCD inspectors down there to inspect every shipment, the local licensing department in Klamath County does it (via IGA) so State BCD doesn't have to travel there;
- Uses the DCBS data network administered by DAS. BCD would be dependent on DAS for restoration of computer access.

Capabilities

- BCD ensures safe building construction by adopting and administering uniform Statewide building codes;
- Enforcing license, code and permit requirements;
- Certifying inspectors and licensing trade professionals;
- Providing building code and rule interpretation;
- Assisting local government building departments;

ESF 3. Public Works & Engineering

- Can provide assistance and expertise on the licensing of electrical, plumbing, elevator and boiler contractors;
- Maintain and provide a current list of building inspectors and design professionals that have been certified in ATC-20 post-earthquake inspection procedures. ATC-20 is a methodology developed by the Applied Technology Council to:
 - Evaluate the extent of damage to structures after an earthquake.
 - Placard buildings to inform owners, occupants and the public if a building is safe to enter and occupy.
- Assists in long term recovery through the normal licensing and permitting process once operations are re-established.

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;
- BCD has no generator or back up power for their facility;
- BCD communications is dependent on telecommunications and internet;
- Loss of computer and data systems would impact BCD's operations significantly;
- With limited exception, BCD's list of ATC-20 post-earthquake inspectors identifies only Oregon residents that have completed ATC training. A catastrophic seismic event would likely require additional inspectors from outside the State;
- BCD operates under ORS 455 - Building Codes Division. It's uncertain how flexible BCD could be on permitting or licensing post-quake. Emergency response may require Governor's order to waive or relax requirements;
 - There are some provisions in the Code for emergency repairs -within 72 hours as written, too small a window of time for this scenario.
 - Past history in those cases is that the repairs are done and permits can be obtained after the fact.
 - Generally speaking, BCD is not able to ignore the licensing requirements in Oregon.
- Limited engineering capabilities in BCD (one staff member), it is unlikely that they would be able to assist with structural engineering assessment.

Oregon OSHA: Ensures employers understand their responsibilities for protecting their workers, especially during emergency response and recovery operations. Enforces occupational safety and health rules, investigates workplace fatalities, major accidents, and safety and health complaints. Coordinates and performs the actions identified within the Worker Safety & Health Support Annex of the National Response Framework, or State equivalent; provides occupational safety and health technical assistance to other State and local entities; assesses responder safety and health resource needs, e.g., OSHA on-site assistance, incident-specific personal protective equipment protocols, training, safety and health monitoring.

ESF 3. Public Works & Engineering

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Respond to request to send liaison with State ECC.

Assets

- OR OSHA has field offices around State.
 - Location of field offices: Medford, Eugene, Salem, Bend, Portland, and Pendleton (Pendleton is a satellite office).
 - Oregon OSHA Laboratory is located in Portland.
- Vehicles for staff are located at each field office;
- Uses standard communication assets (phones, cell phones, internet);
- Uses the DCBS data network administered by DAS. DCBS/Oregon OSHA would be dependent on DAS for restoration of computer access;
- Operates a nationally certified occupational health laboratory in Portland. This well-equipped lab analyzes samples collected by compliance officers and consultants to determine chemical compositions and concentrations of hazardous substances to which workers may be exposed.

Capabilities

- Oregon OSHA serves as a regulatory agency with Statewide authority over public and private sector operations and work for worker safety. Worker safety and health complaints would be addressed through established enforcement policies and procedures. If there is a worker safety & health issue, Oregon OSHA may be tasked with ensuring an employer takes care of the issue;
- Works with other State departments to answer questions on worker safety and health;
- Provides technical assistance (answering questions, distributing information, etc.) regarding worker safety and health;
- Education and training for responders and workers on dealing with safety and health hazards;
- Oregon OSHA can assist employers in complying with regulatory requirements for personal protective equipment;
- Liaises with Federal OSHA to ensure worker health and safety;
- Mechanisms are already in place to work with Federal OSHA in an earthquake scenario. In the context of disaster recovery, Federal OSHA will work with FEMA on the national level, assisting Oregon OSHA. This would go back through ECC for tracking ;
- Coordinates communication with labor unions, contractors, and other organizations regarding responder safety and health issues;
- Oregon OSHA has a large inventory of sampling equipment for a variety of substances and hazards, and staff trained on their use;
- Can coordinate with Federal OSHA to provide specialized response teams, for example, construction, biological or radiation safety. Access to and availability of

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Federal OSHA specialized response teams is contingent on federal/regional priorities.

Support Needed Immediately After a Catastrophic Event:

- By nature of a catastrophic event, 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;
- Electrical power backup for the Capital Mall buildings is serviced off the power grid, and OR-OSHA field offices do not have generators for emergency power backup;
- Oregon OSHA communications are dependent on telecommunications and internet;
- Loss of computer and data systems would impact Oregon OSHA operations significantly, however, enforcement citations could be issued through a manual process;
- Might require communication equipment and most likely vehicles, fuel or transport to work locations;
- No private sector contractors that could help with Oregon OSHA regulatory work, which would be bulk of post-quake work;
- Would need to turn to Federal OSHA for assistance, if necessary.

3.2.3 Department of Environmental Quality

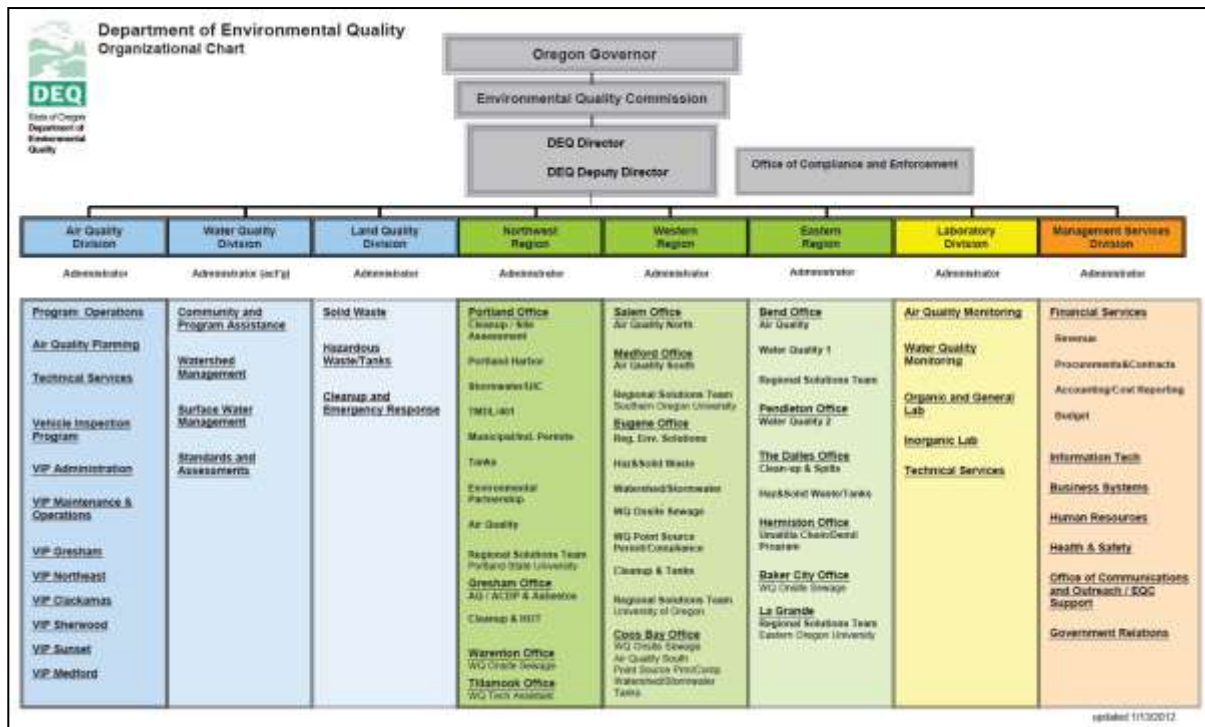
Priorities

- Restoration of DEQ response systems to normal;
- Ensure containment and removal oil and hazardous materials from the environment;
- Recovery of hazardous materials containers that become dislodged from their primary installation site, (pesticides, anhydrous ammonia etc.);
- Contact Emergency Response Services contractors for assistance. These Private Sector contractors have DEQ interoperable radios;
- Coordinate with ODOT on clean up and debris removal.

Assets

- DEQ is divided into 3 regions, and 11 branch offices. Headquarters office is located in Portland with major offices and equipment located in The Dalles, Bend and Pendleton;

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- Mobile emergency response unit – trailer equipped with generators, satellite communications, computer and voice communications with the trailer. Can run the trailer for a short period of time without supplemental fuels / power;
- DEQ has an on-scene coordinator in each of the Bend and Eugene offices. Two on-scene coordinators are in the Portland office.
- One mobile repeater in the mobile emergency response unit;
- DEQ has boats for fish sampling purposes. Assessing shore line and clean up needs. Majority of the boats are staged in the Portland area;
- Contract with NRC Environmental Services which has assets nationwide to draw from for personnel and equipment.
- Mobile emergency response unit – trailer equipped with generators, satellite communications, mobile repeater, computer and voice communications. Can run the trailer for a short period of time without supplemental fuels ;
- Have a group of employees who hold HAM licenses. DEQ does not use HAM radio in any official way for response;
- Civil and chemical engineers, toxicologists and geologists on staff.

Capabilities

- Coordinate with locals for information regarding damage assessment to hazardous materials holding/manufacturing facilities;
- Oregon Health Authority has the lead on drinking water safety and treatment, DEQ coordinates with local sewerage and Oregon Health Authority on drinking water protection and infrastructure restoration;

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- Issue variances and waivers to local governments for work on water and sewer systems for immediate response concerns;
- Provide technical assistance with nonhazardous waste management; including debris and recycling/reuse;
- Provide expertise on environmental and public health issues related to oil and hazardous material incidents;
- Provide expertise on environmental pollution control techniques;
- DEQ is a member of the Regional Response Team/Northwest Area Committee which publishes the regional oil and hazardous materials response plan, the NWACP, http://www.rrt10nwac.com/nwacp_document.htm. The NWACP serves as the State of Oregon Oil and Hazardous Materials Plan (State of Oregon Emergency Management Plan, Volume II, Part 3);
- MOU's with State parks to remove any oil or hazardous materials that make its way into the parks and scenic waterways;
- MOU with Coast Guard to respond in their zones to abate any oil or hazardous materials;
- MOU with California, Washington, British Columbia, Alaska, Hawaii for personnel and equipment to respond to oil spills;
- Provide assistance and information on decontamination procedures;
- DEQ may assist with hazardous materials clean up;
- DEQ also develops comprehensive plans and programs for air and water pollution control and solid and hazardous waste disposal;
- Coordinate with special teams (OSFM HAZMAT Teams, ODOT Incident Response Teams, USCG, EPA, local emergency responders and others);
- Contract with NRC Environmental Services which has assets nationwide to draw from for personnel and equipment;
- Health and safety staff and job safety contractor for DEQ emergency responders;
- Work with local governments for information regarding damage assessment to hazardous materials holding/manufacturing facilities;
- Have PIO's to interface with JIC and ECC.

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;
- Fuel concerns;
- Statewide DEQ communications would be affected by scenario;
- Without fuel and communications primary ESF-10 priorities cannot be met;
- Facility operators will let DEQ know if they have a problem with regard to water/wastewater facilities. Unknown if these operators will be able to report issues.

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Support Needed Immediately After A Catastrophic Event

- Would require immediate personnel assistance from outside of the State;
- Power;
- Fuel or transport to work locations;
- Equipment needs:
 - Several mobile labs.
 - Small boats for assessments.
 - Trucks and trailers to establish a storage area.
- Areas for staging equipment within the first 72 hours;
- Personnel responsible to bring their own PPE, replacement PPE for responders would be needed;
- Communications equipment.

3.2.4 Department of Geology and Mineral Industries

Priorities

- Provide liaison to the State ECC when requested;
- Provide technical assistance following a disaster. Specifically, provide field teams to assist following an event, as appropriate.

Assets

- Primary DOGAMI office is located in Portland with approximately 20 personnel;
- Newport office is staffed with four, Baker City office is staffed with one, Albany office is staffed with 11;
- Have one registered engineer, four engineering geologists;
- Agency functions are redundant at all offices;
- Have a data continuity plan with redundant resources that can be operational within 24 hours of the event;
- Have offsite data/information storage with 'Iron Mountain' – a data storage firm.
- Have two satellite phones – one in Portland and one in Baker City office;
- Four field vehicles- three 4WD vehicles, one car;
 - Each field vehicle has an enhanced safety kit.
- Can provide aerial surveys with assistance from CAP or other non-DOGAMI aviation assets;
- Two RTK GPS systems capable of providing information within 1cm accuracy;
- Maintains contract for LIDAR data collection with Watershed Sciences Inc., offices in Corvallis and Portland. Watershed Sciences has 60 employees, three aircraft, and numerous field vehicles. They are a field based organization and can provide technical abilities for field work;
- Extensive GIS abilities to provide mapping of impacted areas and GIS analysis of incoming data;
- Have outreach specialists to augment ESF 15.

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Capabilities

- Can provide advisory services regarding geologic hazards to responding agencies;
- Collection of data that is perishable such as high water marks, ground conditions that are caused by ground movement and ground failure;
- Provide a geologic base for future planning by analyzing the event and its ramifications;
- Interact with ESF-1, ESF-2 and ESF-12 to determine vulnerabilities of infrastructure life lines;
- Acquisition of data and expert opinion on hazard issues and mitigation techniques to any and all stakeholders, partners and agencies;
- Serve as a clearing house for scientific and event data and collection of post event perishable information;
- Have working agreements with USGS, NOAA, FEMA (risk analysis division), ODF, BLM, Bureau of Reclamation, EPA;
- Contacts at major Universities to augment analysis of impact area conditions

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;
- Staffing may be at one third due to the nature of the event and the proximity of the work force living near the DOGAMI office in Portland;
- Statewide communications would be affected by scenario;
- Without fuel and communications primary priorities cannot be met;
- Assessment falls to the facility operators to let DEQ know if they have a problem with regards to water/wastewater facilities.

Support Needed Immediately After A Catastrophic Event

- Would require communication equipment and most likely vehicles, fuel or transport to work locations;
- Power. All data resources are computerized and would need power to retrieve and work with;
- Field teams would need accessible roadways, as well as fuel, food, water and a base camp area;
- Trained specialists, scientists, geologists, engineers to supplement available personnel;
- Communications equipment, and computer system repair/replacement.

3.2.5 Oregon Military Department

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Ensure usability and safety of OMD facilities;

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- 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 response lifesaving response actions for up to 72 hours at individual unit commander's decision;
- Respond to mission tasking by OEM.

Assets

- ROPER Water purification units located in Portland metro area and Eastern Oregon;
- CERFP (CBRNE Emergency response Force Package) urban search and rescue team would require structural engineer(s) from another agency.

Capabilities

- Assist with potable water transportation and limited distribution;
- Assist with the provision of limited electric power from portable generators;
- Provide heavy equipment and operators, and other resources commensurate with OMD's available and useable resources;
- Repair of damaged roadways (primary function of Albany Oregon unit), would need certified engineering assistance from elsewhere;
- Coordinate with US Army Corps of Engineers on engineering needs;
- Contracts with suppliers of public works assistance.

Catastrophic Event Operational Challenges

- Requirements of public health to certify potable water provided by OMD, specifically the availability of certifying staff;
- Legal issues with purchasing of potable water, only unit capable of ordering bottled water is CERFP, bottled water purchasing would need to be handled through DAS;

Support Needed Immediately After A Catastrophic Event

- CERFP (CBRNE Emergency Response Force Package) urban search and rescue team would require structural engineer(s) from another agency;
- US Army Corps of Engineers provision of engineers and specialists for ESF-3 missions;
- DCERF (Defense Chemical, Biological, Radiological and Nuclear Response Force) providing robust transportation and engineering response (72-96 hours), Title 10 asset.

3.2.6 Department of State Lands

Priorities

- First priority is ensuring life and safety of DSL personnel and ensuring offices are safe for work;
- Provide liaison to State ECC;
- Provide approvals for the use of State lands as necessary for response and recovery.

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Assets

- Have three offices, Salem (80 on staff), Bend (10 staff) and South Slough, Coos Bay (15 staff);
- Natural resource specialists on staff;
- Have scientists on DSL Staff that are linked with the Pacific Tsunami Warning Center;
- Can provide GIS analysis and mapping capabilities. Three specialists that can assist as needed with GIS issues and information;
- Have a small fleet of vehicles in Salem - two 4WD vehicles, three sedans and one cargo van;
- Network of instruments in the South Slough that record water surface elevation and other water quality and meteorological parameters.
- Bend office has six 4WD vehicles;
- Have one boat located in Salem with trailer used to do surveys of property along navigable waterways and survey docks;
- DSL administrative office located in the town of Charleston (SE of Coos Bay on the South Slough);
- South Slough DSL office vehicles:
- Two 4WD vehicles;
- A one ton tilt bed equipped with tandem rear wheels and a bumper mounted winch (located at the SSNERR maintenance facility);
- A half ton conventional pickup with four traction tires. (Located on the OIMB campus);
- We have about seven VHF radios with an assigned frequency;
- Two twin axle utility trailers and a 14 hp 4WD diesel tractor equipped with a small front bucket and a three point trailer hitch and power takeoff. This is a smallish “landscape” tractor that fits on the trailers mentioned above;
- South Slough DSL office boats:
 - Smokercraft 18 foot flat bottomed skiff with trailer and steering console, electric start 4 stroke 40 HP, llocated on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
 - Alumaweld 16 foot semi vee hull with trailer and steering console. Electric start 4 stroke 55 HP located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
 - Valco 16 foot lightweight flat bottom “jon boat” with trailer and 20 HP pull start (location varies between OIMB and SSNERR Interpretive center).
 - Valco 14 foot lightweight flat bottom “jon Boat” without trailer and 15 HP pull start outboard.

Human powered craft including:

- 22’ fiberglass eight passenger canoe with trailer
- Two or three conventional 17’ canoes (three passenger)

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- Three or four Roto molded Kayaks (single passenger)
- Trailer designed to carry four to six paddle craft
- All human powered craft are located at the SSNERR Maintenance facility (outside of the tsunami inundation zone)
- Modified the water supply system at SSNERR's interpretive center to store 2,000 gallons of potable water in two tanks and have another 1,000 gallon potable water storage tank at the Spruce ranch complex near the maintenance facility.
- DSL has access easement agreements with private property owners to gain access to State lands.
- Maintains a data base of all State owned lands.

Capabilities

- Coordinate with the Oregon Department of Transportation when State lands are affected by a disaster or event, including navigable waterways;
- DSL can provide information relevant to wetlands, State-owned forestland and easements that exist in Oregon, as well as other necessary information consistent with the mission of Department of State Lands;
- Provides pre-event tsunami awareness training;
- Administers navigable waterways up to ordinary high water, coast areas – submerged and submersible lands up to three miles out;
- Manages State owned range land and forest lands for income;
- Forest land is managed by the Department of Forestry and timber sales are used to fund education;
- Through the State debris removal plan, tasked with providing State lands for stock piling debris;
- As manager of State owned properties, can use State property to establish staging areas;
- Issue right of way and special use permits for the Army Corps of Engineers, ODOT and other agencies that require access to damaged areas within State lands in Oregon;
- Can assist in the coordination of debris removal;
- Can implement emergency authorization process to allow for emergency removal of debris from waterways without going through the permitting process;
- All staff can be moved to areas of need regardless of area office they are primarily assigned to, or work virtually if offices are damaged and unsafe;
- DSL is a regulatory – land management agency and would provide emergency authorization when and where needed;
- DSL has contracts for legal services, real estate services – appraisals, audit services, technical and natural resource services.

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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;
- Accessibility to fuel resources;
- DSL does not have mobile operations capabilities. Staff can work from anywhere if there is power and communication connectivity;
- All communications depend on land line, cell phone, and computer e-mail capabilities;
- No capabilities to sustain a crew without a living area, food, water and power;
- Environmental laws that may hinder access to and through State owned lands and water ways.

Support Needed Immediately After a Catastrophic Event

- Fuel for vehicles;
- Getting staff where they need to be due to roadways being compromised;
- Need electricity/telecommunications/internet access for operational capabilities and access to computer databases necessary for operations.

3.2.7 Water Resources Department

Priorities

- Inspection of identified 36 high hazard dams (5 federal dams and 31 under Oregon WRD responsibility) west of longitude 125 degrees. Dams falling under WRD responsibility are municipal, private and Irrigation District owned;

High Hazard Dams West of Longitude 123 degrees		
Dam Name	Latitude	Longitude
Pony Creek - Upper	43.3684196	-124.257607
Pony Creek - Lower	43.3789902	-124.242088
Big Creek Res. #1 (Lower)	44.654911	-124.043793
Big Creek Res. #2 (Upper)	44.6573792	-124.031502
Spring Lake Dam	44.9748802	-124.00502
Olalla Dam	44.6809616	-123.930344
Seaside City Reservoir	45.9523315	-123.920792
Mill Creek Dam (Toledo)	44.5736885	-123.909531
Bear Creek (Astoria)	46.1178818	-123.63987
Middle Res.	46.0949898	-123.617188
Wickiup Lake (Clatsop)	46.0861282	-123.608231
Wageman	43.1040611	-123.59005
Berry Creek Dam	43.0404396	-123.555328
Hult Log Storage Pond	44.2402687	-123.49482
North Fork Dam (Benton)	44.5262909	-123.492928
Mercer Res.	44.9037704	-123.470177
McGuire Reservoir	45.3092308	-123.408653
Trask River Barney Res.	45.4483917	-123.393511
Bear Creek Res. Site 3	43.6199799	-123.372787
Winchester Dam	43.283989	-123.353928

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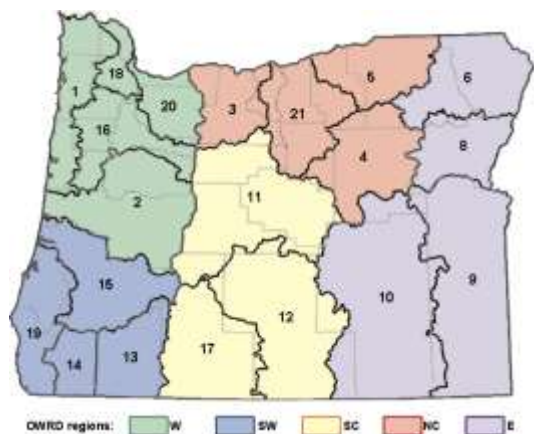
Hayhurst Road Res.	43.6525307	-123.339409
Creekside IWR	42.9343083	-123.306642
Fern Ridge	44.1202393	-123.301918
Creekside Dam #1	42.9384889	-123.298717
Cooper Creek Reservoir	43.3799782	-123.282097
Plat I Reservoir	43.3934517	-123.25441
Scoggins	45.4751816	-123.198624
Galesville Res.	42.8490982	-123.178841
Santa Clara	44.0994492	-123.148628
Updegrave	43.2943802	-123.122131
Applegate Lake	42.0558281	-123.114578
Paris Res	43.2388992	-123.111298
Cottage Grove	43.7159615	-123.050369
Walters, Glenn #5	45.4733315	-123.045097

***dam names in green are federal dams**

- These assessments are standardized and can be completed within an hour (longer for concrete dams and long embankments) with perfect conditions. Post-quake and with the likely loss of power and roadways this would take longer to complete;
- Assessments can be done via helicopter;
- Provide technical support to dam owners on damaged dams;
- Assist local jurisdictions on understanding dam emergency action plans and actions;
- If needed assist federal partners on inspection of federal dams.
- Provide inspection of levees that fall outside of US Army Corps of Engineers jurisdiction;
- Provide technical expertise on civil engineering, hydrology and geotechnical issues to State agencies and local municipalities.

Assets

- The primary facility for the Water Resource Department is in Salem, with regional managers located throughout the State. (Figure WRD 1). The Salem office serves as the headquarters for WRD operations. Regional offices could be used for WRD response;
- Within these regions there are 21 Water Masters Offices:



Water Resource Department Regions

District 1 c/o Port of Tillamook Bay 4000 Blimp Blvd Tillamook, Oregon 97141 Ph: 503-842-2413 ext 119 Fax: 503-842-3680	District 2 Central Lane Justice Court 220 5th St Springfield, OR 97477 Ph: 541-682-3620 Fax: 541-746-1861	District 3 2705 E 2nd St The Dalles, Oregon 97058 Ph: 541-506-2650 Fax: 541-506-2651	District 4 201 S Humbolt, Suite 180 Grant County Courthouse Canyon City, Oregon 97820 Ph: 541-575-0119 Fax: 541-575-0641

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District 5 116 SE Dorion Ave Pendleton, Oregon 97801 Ph: 541-278-5456 Fax: 541-278-0287	District 6 10507 N McAlister Rd #6 La Grande, Oregon 97850 Ph: 541-963-1031 Fax: 866-214-3493	District 8 Baker County Courthouse 1995 3rd Street, Suite 180 Baker City, Oregon 97814 Ph: 541-523-8224 ext 31 Fax: 866-214-3493	District 9 Malheur County Courthouse #4, 251 B St W Vale, Oregon 97918 Ph: 541-473-5130 Fax: 541-473-5522
District 10 Harney County Courthouse 450 N Buena Vista #3 Burns, OR 97720 Ph: 541-573-2591 Fax: 541-573-8387	District 11 1128 NW Harriman St Bend, Oregon 97701 Ph: 541-388-6669 Fax: 541-388-5101	District 12 513 Center St Lakeview, Oregon 97630 Ph: 541-947-6038 Fax: 541-947-6063	District 13 10 S Oakdale, Rm 309A Medford, Oregon 97501 Ph: 541-774-6880 Fax: 541-774-6187
District 14 700 NW Dimmick St. Grants Pass, Oregon 97526 Ph: 541-479-2401 Fax: 541-479-2404	District 15 Douglas County Courthouse, Room 306 Roseburg, Oregon 97470 Ph: 541-440-4255 Fax: 541-440-6264	District 16 725 Summer St NE, Suite A Salem, Oregon 97301 Phone: 503-986-0889 Fax: 503-986-0903	District 17 5170 Summers Ln Klamath Falls, Oregon 97603 Ph: 541-883-4182 Fax: 541-885-3324
District 18 1400 SW Walnut St, Suite 240 Hillsboro, Oregon 97123 Ph: 503-846-7780 Fax: 503-846-7785	District 19 Physical Address: 225 N Adams Coquille, Oregon 97423 Ph: 541-396-1905 Fax: 541-396-1906	District 20 1678 S Beavercreek Rd, Suite L Oregon City, Oregon 97045 Ph: 503-722-1410 Fax: 503-722-5926	District 21 221 S Oregon St. P.O. Box 427 Condon, OR 97823 Ph: 541-384-4207 Fax: 541-384-2167

- Regional and Water Masters offices have moderate autonomy and are not completely dependent on the main facility in Salem;
- WRD currently has two engineers with civil and geotechnical engineering expertise. There are also five hydrologists with WRD. These personnel are located in Salem;
- WRD has a fleet of 20-30 4x4 vehicles throughout the State at the primary, regional and Water Master Offices;
- WRD has limited communications abilities (telephone and internet), and no radio capacity. WRD does have some Spot locators;
- Dam inspections and field activities can be done without computer access;
- WRD has dam specifications for Statewide dams;
- WRD estimates that approximately 70% of its personnel (100% of response personnel) would be available following the earthquake with coastal facilities being hit the hardest.

Capabilities

- Can provide dam safety engineering assessment of dams;
- Can provide geotechnical engineering expertise;
- WRD can provide limited structural engineering assessment work on structures and bridges;
- Through the Joint Information Center, can provide the public with alert and notification information regarding dam safety issues;
- Can provide dam and levee damage assessment training (1/2 day of instruction, can train approx. 30 people);

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- Investigate failures of dams and what mechanisms contributed to the failure;
- Can coordinate with Association of State Dam Safety officials for assistance;
- WRD Well Construction program would be involved in long term recovery;
- Long Term recovery assistance with water rights issues following disruption of existing systems;
- Most communities in Western Oregon use groundwater as a component of their drinking water system; WRD would require construction standards for groundwater development for protection of aquifers. WRD will provide technical assistance in the restoration of groundwater systems in an orderly way that ensures continued use of groundwater investments;
- Liaise with Corps of Engineers, FERC, Bureau of Reclamation and FEMA on dam safety and water resource issues. Provide a liaison to State ECC.

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;
- Accessibility to fuel resources;
- One of WRD engineers serves as the ECC liaison, leaving the agency short staffed;
- Depending on number of dams needing damage assessment more trained engineering staff may be needed;
- WRD will need communication assistance (both communication assistance and potentially radio equipment for use in dam inspections);
- Aerial transportation for airborne assessments of dams (helicopters would be needed for a detailed aerial assessment).

3.3 Adjunct Agencies

3.3.1 Oregon Water / Wastewater Agency Response Network (ORWARN)

ORWARN is a water and wastewater utility Statewide mutual aid and assistance network.

Oregon Water/Wastewater Agency Response Network is part of a national effort by water and wastewater utilities to establish voluntary intrastate mutual aid and assistance networks. The objective is to provide rapid, short term deployment of emergency services to restore critical operations to utilities that have sustained damages from natural or man-made events.

Priorities

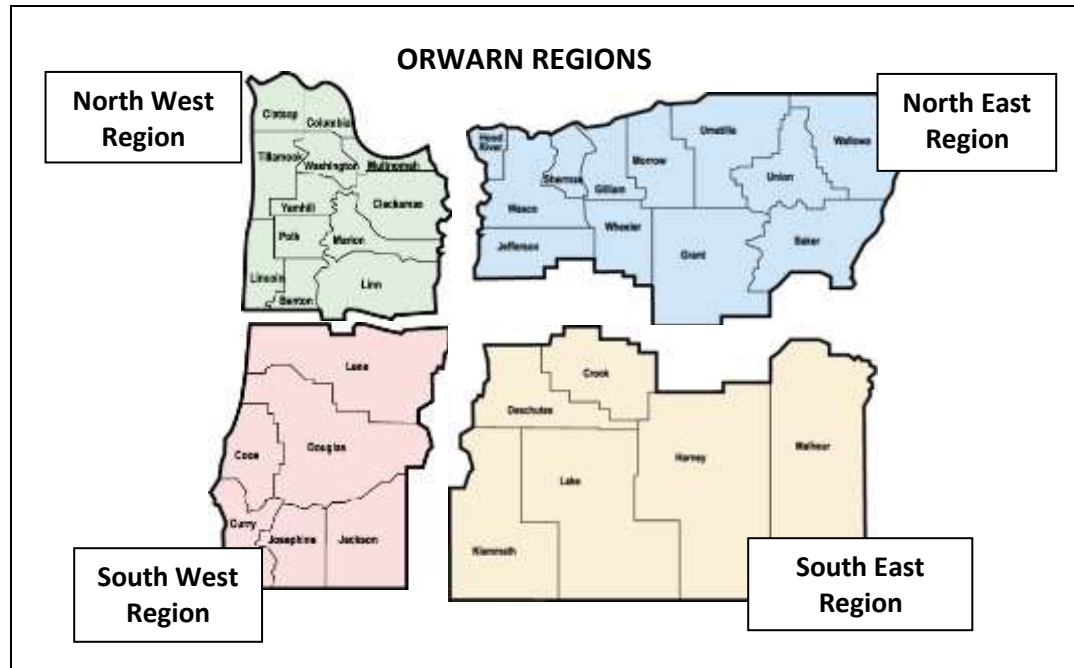
- Life and safety of responders and the public;
- Reestablishing potable water networks in affected areas;
- Reestablishing waste water networks in affected areas.

Assets

- Statewide mutual aid agreement supports:
 - Voluntary mutual aid between member utilities.

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- Expedited arrival of assistance through pre-established agreements.
- Reduced administrative conflict.
- Emphasis on restoration of utility services.



- Over 100 participating public and private water utility districts are members and signatories in the State:

ORWARN Members (Accurate as of Feb 2012)		City	County
1	Boring Water District No. 24	Boring	Clackamas
2	City of Albany	Albany	Linn
3	City of Ashland	Ashland	Jackson
4	City of Baker City	Baker City	Baker
5	City of Bandon	Bandon	Coos
6	City of Banks	Banks	Washington
7	City of Bay City	Bay City	Tillamook
8	City of Beaverton	Beaverton	Washington
9	City of Bend	Bend	Deschutes
10	City of Central Point	Central Point	Jackson
11	City of Coburg	Coburg	Lane

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12	City of Corvallis	Corvallis	Benton
13	City of Cottage Grove	Cottage Grove	Lane
14	City of Dayton	Dayton	Yamhill
15	City of Detroit	Detroit	Marion
16	City of Dundee	Dundee	Yamhill
17	City of Estacada	Estacada	Clackamas
18	City of Eugene Wastewater	Eugene	Lane
19	City of Fairview	Fairview	Multnomah
20	City of Florence	Florence	Lane
21	City of Garibaldi	Garibaldi	Tillamook
22	City of Gates	Gates	Marion
23	City of Gladstone	Gladstone	Clackamas
24	City of Glendale	Glendale	Douglas
25	City of Gold Beach	Gold Beach	Curry
26	City of Grants Pass	Grants Pass	Josephine
27	City of Gresham	Gresham	Multnomah
28	City of Hillsboro	Hillsboro	Washington
29	City of Idanha	Idanha	Marion
30	City of Independence	Independence	Polk
31	City of Keizer	Keizer	Marion
32	City of Klamath Falls	Klamath Falls	Klamath
33	City of Lake Oswego	Lake Oswego	Clackamas
34	City of Manzanita	Manzanita	Tillamook
35	City of Mill City	Mill City	Marion
36	City of Molalla	Molalla	Clackamas
37	City of Monmouth	Monmouth	Polk
38	City of Newberg	Newberg	Yamhill
39	City of North Plains	North Plains	Washington

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40	City of Oregon City	Oregon City	Clackamas
41	City of Pendleton	Pendleton	Umatilla
42	City of Philomath	Philomath	Benton
43	City of Port Orford	Port Orford	Curry
44	City of Portland Environmental Services	Portland	Multnomah
45	City of Portland Water Bureau	Portland	Multnomah
46	City of Redmond	Redmond	Deschutes
47	City of Salem	Salem	Marion
48	City of Sandy	Sandy	Clackamas
49	City of Sherwood	Sherwood	Washington
50	City of Silverton	Silverton	Marion
51	City of Springfield	Springfield	Lane
52	City of Sweet Home	Sweet Home	Linn
53	City of The Dalles	The Dalles	Wasco
54	City of Tigard	Tigard	Washington
55	City of Toledo	Toledo	Lincoln
56	City of Troutdale	Troutdale	Multnomah
57	City of Tualatin	Tualatin	Washington
58	City of Turner	Turner	Marion
59	City of Veneta	Veneta	Lane
60	City of Waldport	Waldport	Lincoln
61	City of West Linn	West Linn	Clackamas
62	City of Wilsonville	Wilsonville	Clackamas
63	City of Wood Village	Wood Village	Washington
64	City of Yachats	Yachats	Lincoln
65	Clackamas County Water Environment Services	Clackamas	Clackamas
66	Clackamas River Water	Clackamas	Clackamas
67	Clean Water Services	Hillsboro	Washington

ESF 3. Public Works & Engineering

68	Corbett Water District	Corbett	Multnomah
69	Crescent Water Association	Crescent	Klamath
70	Eugene Water & Electric Board	Eugene	Lane
71	Joint Water Commission	Hillsboro	Washington
72	LA Water Co-Op	Gaston	Washington
73	Langlois Water District	Langlois	Curry
74	Lusted Water District	Troutdale	Multnomah
75	Metropolitan Wastewater Management Commission	Springfield	Lane
76	Mulino Water District No. 1	Mulino	Clackamas
77	Multnomah County Drainage District No. 1	Portland	Multnomah
78	North Clackams County Water Commission	Oregon City	Clackamas
79	Oak Lodge Sanitary District	Milwaukie	Clackamas
80	Oak Lodge Water District	Milwaukie	Clackamas
81	Rainbow Water District	Springfield	Lane
82	Raleigh Water District	Portland	Washington
83	Rivergrove Water District	Lake Oswego	Clackamas
84	Rockwood Water People's Utility District	Portland	Multnomah
85	Rogue Valley Sewer Services	Central Point	Jackson
86	Seal Rock Water District	Seal Rock	Lincoln
87	South Fork Water Board	Oregon City	Clackamas
88	Southwood Park Water District	Beaverton	Washington
89	Springfield Utility Board	Springfield	Lane
90	Suburban East Salem Water District	Salem	Marion
91	Sunrise Water Authority	Happy Valley	Clackamas
92	Tillamook County Creamery Association	Tillamook	Tillamook
93	Tillamook County Public Works	Tillamook	Tillamook
94	Tualatin Valley Water District	Beaverton	Washington
95	Valley View Water District	Portland	Washington

ESF 3. Public Works & Engineering

96	Warren Water Association	Warren	Columbia
97	Watseco-Barview Water District	Rockaway Beach	Tillamook
98	West Slope Water District	Portland	Multnomah
99	Westport Sewer Service District of Clatsop County	Astoria	Clatsop
100	Wolsborn Farms Water District	Hillsboro	Washington

Typical Assets Available Through Member Agencies

- Multiyear supply contracts with John Deere, CAT, United Rental, companies for equipment. The companies will deliver equipment when and where needed;
- Contracts for laboratory services for water testing;
- Fleet contracts for repair/replacement;
- Fuel - Some utilities have internal fuel supplies of varying quantities. Others use commercial fuel;
- Contracts with Hillsboro Aviation for aerial observation / assessment of dams and reservoirs;
- Emergency response command trailer with satellite capabilities;
- Portland area has ham radio capabilities. Have exercised with ARES and have access to their services;
- Nextel communications capabilities. Have redundant communications capabilities and can function on Statewide frequencies;
- Water distribution/delivery systems;
- Have open ended contracts with architect and engineering firms.

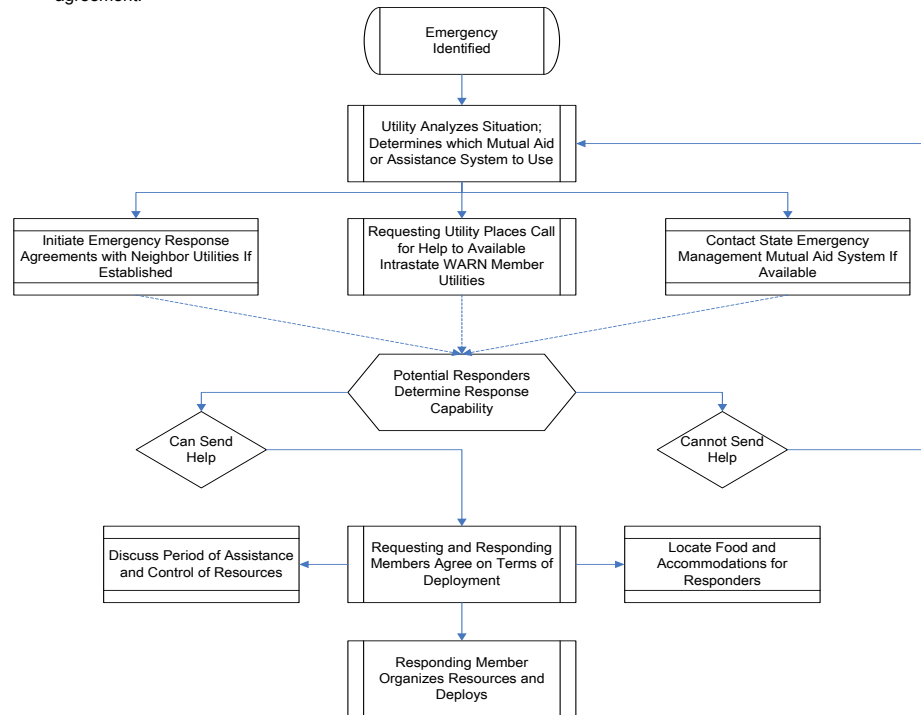
Capabilities

- Help other communities who need emergency assistance in reestablishing water and waste water services;
- Work to provide bacteriologically safe water in impacted areas;
- Coordinate and interface with the following agencies:
 - American Water Works Association
 - Oregon Association of Water Utilities
 - Water Environment Federation
 - FEMA
 - Oregon Department of Environmental Quality
 - U.S. Environmental Protection Agency

ESF 3. Public Works & Engineering

ORWARN Mutual Aid can be activated as follows:

A utility may have as many as three options for obtaining assistance via local one to one agreements, access through a statewide mutual aid program for public agency responders, and the intrastate WARN utilities agreement.



- All team activations for equipment and teams conform to FEMA's resource typing for public works.

ORWARN Member Utilities can:

- Coordinate and compile damage reports from utilities;
- Coordinate damage assessment activities with other agencies, e.g., county emergency management agencies, utility engineers, etc.;
- Log, track, and display damage assessment information;
- Provide damage assessment information to the ORWARN Leader or designated resource coordination Response Team Member to facilitate incident prioritization;
- Assemble and maintain information concerning critical facilities and special needs facilities associated with each utility included in the ORWARN Operational Plan;
- Transmit Damage Assessment Reports to the other appropriate agencies, as requested;
- Support mutual aid crews in the field interacting with the public to gather more information as the emergency unfolds, and methods to gather damage information;
- Coordinate damage data with the State and FEMA responders to assist in the recovery process;
- Act as a liaison to the Utilities Branch of the county, and/or State level emergency operation centers;
- Identify possible sources of additional support for ORWARN Member Utilities;
- Identify gaps in the requests and resources available;

ESF 3. Public Works & Engineering

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;
- Accessibility to fuel resources;
- Roadway access to damaged facilities;
- Communication coverage issues.

Support Needed Immediately After A Catastrophic Event

- Fuel;
- Trained personnel;
- Equipment and pipe line replacement materials;
- EMAC DPW response teams and equipment;
- Responding teams will need base camps with food, sleeping arrangements, and sanitary facilities;
- 'Cold start' package to get water treatment plants operational;
- Generators;
- Tires – all sizes to include large truck tires.

4 ESF-3 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Public Works and Engineering resources have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

ODOT will provide a representative to the ECC who will be the primary point of contact for all ESF-3 needs. ODOT maintains an Agency Operations Center (AOC) off site to specifically manage and coordinate their resources.

4.1 Objective

Objective is initially to provide an accurate assessment of damages to determine the need for State and/or federal assistance, and to conduct safety evaluations to protect public health and welfare.

To establish policies, procedures, and priorities for water resources, sewer facilities, waste disposal and to provide for coordinating immediate and continued engineering resources, repair and construction management, emergency contracting, and expertise following a Cascadia Subduction Zone Earthquake and resulting tsunami.

4.2 Challenges

- Infrastructure interdependencies create a demand for a synchronized approach to repair and restoring capacity;
- Limited availability of repair parts for major system components are in short supply and have long lead times to replace;

ESF 3. Public Works & Engineering

- Lack of functional communication will limit the ability to assess damage to key infrastructure.

4.3 Assumptions:

- Damage from the initial earthquake and tsunami will destroy most of HWY 101 and other roads that provide access to the coast;
- Number of significantly damaged water, wastewater, communications, gas and power infrastructure locations will overwhelm the limited number of engineers, inspectors and crews to conduct assessments and inspections;
- Instant loss of land line/network communications/power will limit ability Statewide of providing local situational awareness;
- Significant damage and debris will limit access to conduct assessments and repair;
- Access and supporting infrastructure to/from airports will be a limiting factor for aerial delivery of resources;
- Aftershocks will cause a significant amount of additional damage during the response;
- Tsunami threat from aftershocks and floating debris will limit access to coastal communities;
- The initial earthquake and continuing aftershocks will cause an immediate region-wide power outage;
- Loss of power will last for months throughout the impacted area;
- Damage to natural gas and petroleum pipelines will contribute to fuel shortages in entire region;
- Dams and Levees will sustain damage during the initial earthquake and will require immediate assessment;
- Potable water will be needed for vast portions of Western Oregon;
- Wastewater treatment will be severely impacted in Western Oregon, adding to already unhealthy conditions;
- Fuel requirements for assessment and repair crews will exceed local capability;
- Local, State and Federal capabilities and resources will be overwhelmed by the magnitude of the incident;
- 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, fog may hamper response operations.

ESF 3. Public Works & Engineering

4.4 ESF 3 Shortfalls and Requirements:

SHORTFALLS	REQUIREMENTS
Damage assessment capability. (Power, Gas, Water, Wastewater, Petroleum)	▪ Aerial Platforms to conduct visual inspections to key infrastructure sites. ▪ Tactical Communications support to coordinate infrastructure assessments/repair. ▪ Geospatial prioritization for assessments
Limited access to the impacted area	▪ Rotary wing support to transport repair teams. ▪ Security for Repair and assessment teams. ▪ Debris clearance to provide access to impacted areas. ▪ Waivers for driver restrictions and oversize vehicles on public roads.
Availability of local crews to provide repair and restoration crews.	▪ Coordinate priorities and requirements between public and private sector partners. ▪ Life support and facilities for out of State repair crews

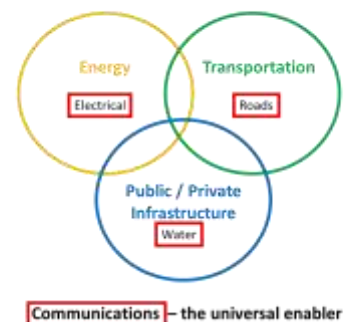
4.5 Concept of Operations

Hazard analysis indicates an earthquake and subsequent tsunami will severely disrupt public works facilities into and within the Statewide impacted areas and the surrounding areas. Damage assessment by qualified personnel and transportation into and within impacted areas will be challenging. Transporting heavy equipment and other resources will require unique solutions. Significant resources and qualified personnel from areas outside impacted areas will be needed.

ESF-3 functions include but are not limited to:

- Due to the limited number of licensed building inspectors and State-employed engineers, there will be an immediate request for additional engineering support from federal government and/or EMAC request;
- ESF-3 will support county and local building officials in inspecting and evaluating critical facilities with State-licensed building inspectors and/or engineers;
- Coordinate debris removal in conjunction with Oregon Debris Removal Plan;
- Coordinate with water and sewage treatment facilities in all matters concerning water supply quality and sewage treatment;
- Plan and prepare for the impact on the water and develop strategies to provide water in the Operational Areas;
- Plan and prepare for the impact on the water and develop strategies to provide water in the Operational Areas;
- Coordination with ESF -1 ESF-2, ESF-12 on prioritizing areas where

Critical Infrastructure Prioritization



ESF 3. Public Works & Engineering

transportation, public works, communications and power infrastructure can be repaired in tandem.

- Identify private sector contractors for engineering assistance, provision of potable water, sanitation supplies, portable sanitation equipment or equipment to use in repair of facilities in support of the earthquake response efforts;
- Identify points of contact (POC), methods of operations, and access procedures that will allow for rapid response to those requirements;
- Coordinate with U.S. Army Corps of Engineers and other Federal partners as requested to provide engineering support;
- Prepare and coordinate with ESF-1 and ESF-7 to provide transportation requirements for public works supplies and equipment;
- Identify agencies and organizations that could provide additional resources in support of the earthquake response efforts;
- Establish engineering priorities, and coordinate those priorities with State ECC;
- The emergency operations necessary for the performance of this function include but are not limited to:
 - ESF-3 responding agencies activate ESF-3 Public Works and Engineering Plans through their AOCs.
 - State ECC receives and coordinates county and State agency infrastructure requirements (personnel, equipment) to begin restoration of necessary utilities.
 - Coordinate with and request ESF-13 source and provide personnel to accompany ESF-3 responders to maintain security.
 - Coordinate with appropriate agencies to determine the damage status and the operability of water and wastewater facilities.
 - Validate resource shortfalls and obtain necessary resources.
 - Coordination with Federal partners.

5 Supporting Documents

- National Response Framework, ESF 3 – Public Works and Engineering
- County ESF 3 Annexes
- Oregon Department of Transportation Emergency Operations Plan
- Various Dam Emergency Action Plans
- ORWARN Mutual Aid/Assistance Operational Plan

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 4 – Firefighting

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ESF 4 Tasked Agencies	
Primary Agencies	Oregon Department of Forestry (ODF) Office of the State Fire Marshal (OSFM)
Supporting Agency	Oregon Military Department (OMD)
Adjunct Agencies	Oregon Department of Corrections (DOC)

1 Purpose

Detect and suppress wildland, rural, and urban fires resulting from, or occurring coincidentally with a Cascadia Subduction Zone earthquake and resulting tsunami.

2 Scope

Coordinates support of firefighting activities, including detection of fires, and providing personnel, equipment, and supplies in support of all agencies involved in rural and urban (OSFM) and wildland (ODF) firefighting operations.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Oregon Department of Forestry

- Works in conjunction as a fire protection agency with the Oregon State Fire Marshal's office and other agencies as needed.
- ODF operates within a complete and coordinated system of federal, State and local fire jurisdictional partners to meet its primary mission of protecting forest resources; this is second only to saving lives. Structural protection, though indirect, shall not inhibit protection of forest resources.
- 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.

Priorities

- Life and safety of responders and the public;
- Ensure safety of personnel and facilities;
- Assessment of State forestry issues as a result of the incident;
- Coordination 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.

ESF 4. Firefighting

- 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:

ODF Area Headquarters and Statewide Offices

Northwest Oregon Area Offices	PHONE	FAX
Eastern Oregon Area / Central Oregon District /Prineville Unit PO Box 670, 3501 E Third Street Prineville, OR 97754	(541) 447-5658	(541) 447-1469
Central Oregon Interagency Dispatch 4550 SW Airport Road, Prineville, OR 97754	(541) 416-6800	(541) 416-6847
The Dalles Unit 3701 W 13 th , The Dalles, OR 97058	(541) 296-4626	(541) 298-4993
Mt. Hood Guard Station 6640 Copper Spur Rd, Mt. Hood-Parkdale, OR 97041	(541) 352-6303	
White River Guard Station 78519 Dodson Rd, Wamic, OR 97063		
Sisters Sub-Unit PO Box 190, 114 W Washington, Sisters, OR 97759	(541) 549-2731	(541) 549-9422
John Day Unit 415 Patterson Bridge Road, P.O. Box 546, John Day, OR 97845	(541) 544-2142	(541) 575-2253
Long Creek Guard Station At the ODOT Maintenance Station Hwy 395 Long Creek, OR	(541) 421-3692	none
Fossil Sub-Unit 45945 Hwy 10, Fossil, OR 97830	(541) 763-2575	(541) 763-2027
Monument Guard Station PO Box 386, Monument, OR 97864	(541) 934-2300	(541) 934-2301
Tupper Guard Station 15 mi East of HWY 207, On USFS 21 RD	(541) 676-9776	none
Klamath/Lake District Office/ Klamath Unit 3200 DeLap Road, Klamath Falls, OR 97601	(541) 883-5681	(541) 883-5555

ESF 4. Firefighting

Klamath Interagency Fire Center 6300 Summers Lane, left on Wings Way, Klamath Falls, OR 97601	(541) 883-5693	(541) 883-6830
Lakeview Unit 2290 North 4th Street, Lakeview, OR 97630	(541) 947-3311	(541) 947-3078
Lakeview Interagency Fire Center HWY 395 to S 9 th ST West 4 to 1000 S 9 th ST, Lakeview, OR 97630	(541) 947-6315	(541) 947-6317
Bly Guard Station 7686 Happy Hollow Lane, Bonanza, OR 97623	(541) 545-6596	none
Silver Ranger Station	(541) 576-2470	none
Camp Six Guard Station	none	none
Sand Creek Guard Station	(541) 365-4441	none
Northeast Oregon District Office/ La Grande Unit 611 20th Street, La Grande, OR 97850	(541) 963-3168	(541) 962-1058
Northeast Interagency Fire Center Pierce Road, La Grande, OR 97850	(541) 963-7171	(541) 962-8673
Baker City Sub-Unit 2995 Hughes Lane, Baker City, OR 97814	(541) 523-5831	(541) 523-587
Powder River Corrections 3600 13 th Street, Baker City, OR 97814	(541) 963-7171	none
Unity Guard Station Unity, OR 97884	(541) 446-3600	none
Pendleton Unit 1055 Airport Road, Pendleton, OR 97801	(541) 276-3491	(541) 276-0710
Pendleton Interagency Communication Center 2517 SW Hailey Ave, Pendleton, OR 97801	(541) 278-3732	(541) 278-3750
Ukiah Guard Station Ukiah, OR 97880	(541) 427-3151	(541) 427-3152
Wallowa Unit 802 W. Hwy. 82, Wallowa, OR 97885	(541) 886-2881	(541) 886-9085
Courtney Butte Guard Station	none	none
Walker Range Patrol Association P.O. Box 665, Gilchrist, OR 97737	(541) 433-2451	(541) 433-2215

ESF 4. Firefighting

Northwest Oregon Area Offices	PHONE	FAX
NW Oregon Area/ Forest Grove District 801 Gales Creek Rd, Forest Grove, 97116	(503) 359-7426	(503) 359-9514
Astoria District 92219 HWY 202, Astoria, OR 97103	(503) 325-5451	(503) 325-2756
North Cascade District/ Santiam Unit 22965 North Fork Road SE, Lyons, OR 97358	(503) 859-2151	(503) 859-2158
Molalla Unit 14995 S Hwy 211, Molalla, OR 97038-8441	(503) 829-2216	(503) 829-4736
Haskins Creek Guard Station 23100 Haskins Creek Rd, Yamhill, OR 97146	none	none
Columbia City Unit 405 E Street, Columbia City, OR 97018	(503) 397-2636	(503) 397-6361
Clatskanie Guard Station 76781 Palm Hill Road, Clatskanie, OR 97016	(503) 728-2150	none
Pittsburg Guard Station 62435 N Nehalem HWY, Vernonia, OR 97064	(503) 429-2501	none
JE Schroeder Seed Orchard 3700 Mahony Rd N, St. Paul, OR 97137	(503) 390-8480	(503) 390-6576
South Fork Camp 48300 Wilson River Hwy, Tillamook, 97141	(503) 842-7213	(503) 842-6572
Tillamook District 5005 3rd Street, Tillamook, OR 97141-2999	(503) 842-2545	(503) 842-3143
West Oregon District - Philomath 24533 Alsea HWY, Philomath, OR 97370	(541) 929-3266	(541) 929-5549
Dallas Unit 825 Oak Villa Road, Dallas, OR 97338	(503) 623-8146	(503) 623-9034
Toledo Unit 763 NW Forestry Road, Toledo, OR 97391	(541) 336-2273	(541) 336-5261
Southern Oregon Area Offices	PHONE	FAX
Southern Oregon Area/ Roseburg Unit 1758 NE Airport Road, Roseburg, OR 97470-1499	(541) 440-3412	(541) 440-3419
Coos District 63612 Fifth Rd, Coos Bay, OR 97420	(541) 267-4136	(541) 269-2027
Coos Forest Protective Association (CFPA)/ Coos Bay Unit 63612 Fifth Rd, Coos Bay, OR 97420	(541) 267-3161	(541) 269-2027

ESF 4. Firefighting

Bridge Unit 98247 Bridge Lane, Myrtle Point, OR 97458	(541) 572-2796	(541) 572-4316
Gold Beach Unit PO Box 603, Gold Beach, OR 97444	(541) 247-6241	none
Reedsport Sub-unit 2925 Longwood Drive, Reedsport, OR 97467	(541) 271-2224	(541) 271-9494
Wells Creek Guard Station 130 Wells Creek Road, Scottsburg, OR 97472	(541) 587-4346	none
Four Mile Guard Station 46946 HWY 101, Bandon, OR 97411	(541) 347-3400	none
Brookings Guard Station 555 5th Street, Brookings, OR 97416	(541) 469-2302	none
Haskins Creek Guard Station 23100 Haskins Creek Road, Yamhill, OR 97146	none	none
Douglas Forest Protective Association (DFPA) 1758 NE Airport Road, Roseburg, OR 97470	(541) 672-6507	(541) 440-3424
South Cascade District/ Eastern Lane Unit 3150 Main Street, Springfield, OR 97478	(541) 726-3588	(541) 726-2501
Sweet Home Unit 4690 HWY 20, Sweet Home, OR 97386	(541) 367-6108	(541) 367-5613
Southwest Oregon District/ Medford Unit 5286 Table Rock Road, Central Point, OR 97502	(541) 664-3328	(541) 776-6184
Grants Pass Unit 5375 Monument Drive, Grants Pass, OR 97526	(541) 474-3152	(541) 474-3158
Grants Pass Interagency Fire Center 657 Flaming Road, Grants Pass, OR 97526	(541) 471-6830	(541) 471-6888
West Lane District 87950 Territorial HWY, Veneta, OR 97487-0157	(541) 935-2283	(541) 935-0731
Florence Unit 2660 Kingwood Street, Florence, OR 97439	(541) 997-8713	(541) 997-3737

Assets Continued

- Three Incident Management Teams consisting of 33 personnel qualified through NWCG. Type 1 teams operate on a rotational system through the fire season. Type 1 teams include, mobile kitchen, showers, communications trailers and other support services;
- Type 1 incident management teams are staffed with ODF employees across the State plus one fire service structural liaison for each team.

ESF 4. Firefighting

- Several days' worth of fuel for generators to sustain the three Incident Management Teams;
- 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.

Communications:

- 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;
- ODF is capable of setting up interoperable communications anywhere.
- Have COOP and BCP that addresses primary facilities and capabilities;
- ODF has three fixed wing aircraft and contracts with aviation companies to provide rotary and fixed wing aircraft;
- Inventory and GIS mapping capability of public and private forest road networks;
- Dozers, earth moving and road building equipment located at various locations in the State;
- Three water trailers capable of carrying 1,000 gallons of potable water, each;
- MOU's with all local fire jurisdictions;
- MOU's with federal firefighting agencies; Forest Service, BLM (Bureau of Land Management), BIA (Bureau of Indian Affairs), National Parks, US Fish and Wildlife Service, National Wildfire System for support;
- Wildland Fire Engines, water tenders and personnel for emergency response located throughout the State;

Personnel:

- Approximately 800 full time employees located at offices throughout the State;
- Approximately 800 seasonal employees (summer) located at offices throughout the State;
- Retiree and previously qualified personnel can be used to supplement personnel;
- Meteorologists on ODF staff;
- All incoming personnel assistance from other states is trained to the same national standard;
- Have road engineers who can determine roadway safety and landslide probability;
- Retiree, qualified personnel can be used if available;
- Look out towers with cameras located throughout State;
- Automated weather stations deployed in forested areas throughout the State capable of transmitting a constant stream of weather data.

Capabilities

- The primary response mission of ODF is wildland firefighting.
- Tasked with protection of approximately 16 million acres (24,900 square miles) of private and public forestland from fire. The acreage protected includes 3.5 million acres of wild land-urban interface, which are forest lands with residences and other structures within the reach of wildfire in that area.
- Provide logistical support for other State and local responders;
- Through forest road inventory of public and private lands, ODF is capable of identifying alternate access to areas if main roadways are impassable or damaged;
- Private sector contracts and relationships with private forest land owners enables access to private logging roads and logging equipment, for wildland firefighting and road clearance;
- Private sector contracts with aviation companies to provide rotary and fixed wing aircraft;
- Using ODF aircraft, or contracted aircraft, can conduct aerial assessment and wildland firefighting missions;
- Has equipment and personnel to open forest road systems;
- Some road construction (gravel road) capability;
- Work with County Sheriff's and ODOT to establish evacuation routes;
- Provide situational awareness and public outreach concerning wildland fire.

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;
- ODF can protect urban / wild land interface only, not trained to provide support for structural firefighting.

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;
- Water;
- Additional trained personnel to assist with ODF operations;
- Transportation assistance to reach ODF facilities and/or impacted areas;

ESF 4. Firefighting

- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

3.1.2 Office of the State Fire Marshal

OSFM manages and coordinates Oregon's firefighting activities. This function is accomplished by mobilizing firefighting resources in support of State, Federal, and local wildland, rural and urban firefighting agencies.

The mission of the OSFM is to protect life, property and the environment from fire and hazardous materials.

As described in the *State Fire Service Plan*, the OSFM may coordinate and direct the activities of all structural firefighting resources of the State through the organization of State and county fire defense boards and their respective mutual aid agreements.

- OSFM is responsible for planning and implementing response by structural firefighting forces called up by the Governor under the "Conflagration Act" (ORS 476.510 to 476-610).
- OSFM coordinates and directs three Type 2 all-risk incident management teams and advanced communication equipment. The teams are staffed with local fire officers and OSFM employees.
- OSFM is a member of the Pacific Northwest Wildfire Coordination Group and serves as Oregon State Police fire prevention and control liaison with State and federal fire protections agencies, including Oregon Department of Forestry, US Forest Service and the Bureau of Land Management.
- OSFM operates an Agency Response Center within the State ECC on an "as needed" basis.

Priorities

- Life and safety of responders and affected public;
- Coordination and direction of structural firefighting resources of the State through the organization of State and county fire defense boards and their respective mutual aid agreements;
- Search and rescue;
- Hazardous materials response;
- Incident management;
- Responding to calls for OSFM for implementation of Conflagration Act.

Assets

- Three Incident Management Teams for coordination, which include certified safety officers;
- Three type 1 USAR trailers in the State: Clackamas, Salem, Eugene. Personnel resources come from local fire departments;
- 13 HAZMAT trucks and personnel in the State – regionally deployed. Trucks include hand pumps which can be used to hand pump gas. HAZMAT Teams in Astoria and Coos Bay will be impacted by the event, and cannot be counted on;
- HAZMAT and SAR teams are trained to the national standard;

ESF 4. Firefighting

- All specialized responders are required to bring enough personal food and water for 72 hours;
- 13 Deputy Fire Marshals throughout the State;
- 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.

Capabilities

- 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;
- Incident management;
- Mobilization and Coordination of firefighting resources;
- Fire investigation responsibility;
- Regulate and maintain current State fire code;
- Inspection of hospitals and care facilities to ensure that they meet the ‘life safety’ code;
- Direction and maintenance and use of the Statewide Fire Net/HAZMAT microwave relay radio system;
- Transportation of communication trailers to impacted areas;
- Providing local communications between responders and IMT’s;
- Set up mobile communications and command centers with IMT’s;
- Provide hazardous materials response.

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 firefighting capabilities.

Support Needed Immediately After a Catastrophic Event

- EMAC firefighting resources, personnel, HAZMAT teams and equipment, USAR teams and equipment, mobile interoperable communications, and base camps.
- Equipment and repair abilities to fulfill ESF-4 mission tasks;

- Fuel for generators and vehicles to include fuel for resources responding under the Conflagration Act;
- Roadway accessibility;
- Air resources to move equipment and personnel.

3.2 Support Agencies

3.2.1 Oregon Military Department

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Ensure usability and safety of OMD facilities;
- 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.

Capabilities

- Providing wildland firefighting support;
- Debris clearance;
- Aviation assets to support firefighting operations;
- Air guard has firefighters at Kingsley and PANG airfields;
- Assist with resource distribution;
- Potable water transportation;
- Assist fire operations in establishing communications networks with fixed and mobile radios;
- Provide aerial surveillance;
- Provision of limited electric power from portable generators;
- The Guard may also assist in search and rescue, lifesaving and air ambulance missions.

Assets

- Air guard has firefighters at Kingsley and PANG airfields;
- Aviation assets to support firefighting operations;
- Retardants for firefighting;
- Wildland firefighting gear and vehicles located at Astoria and Biak.

Catastrophic Event Operational Challenges:

- Guard is unable to respond to structural fires;
- Limited water availability assets;

ESF 4. Firefighting

- “Red Card” firefighting training time for Guard Members.

Support Needed Immediately After a Catastrophic Event

- Fuels and transportation/storage of fuel;
- Additional fixed and rotary aircraft and assets;
- Additional supplies of firefighting equipment;
- Additional retardant supply.

3.3 Adjunct Agencies

3.3.1 Department of Corrections

Capabilities

- Provide Central Distribution Center (CDC) as possible repository for national stockpile operations;
- Each DOC facility has medical personnel to help injured at the facilities;
 - Basic medical needs of inmates & staff are met on site at each facility
- Inmate crews can help with USAR & fire teams (set up base camp, provide food, keep things going for the professional USAR teams from the base camps);
- Clean-up crews (debris removal);
- Fire suppression assistance (wildland);
- DOC can supply trained inmate flaggers;
- Can provide temporary housing (Fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing
- Provide equipment and operators;
 - Evacuations (moving people)
 - Trucks, bulldozers, other heavy equipment
- Can possibly augment response with DOC fuel supplies;

Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations;
 - Semi-trucks (sleepers)
 - Also have refrigeration & dry good trucks
 - Vehicles have manual fuel pumps on board
 - Some earthmoving equipment (bulldozers, dump trucks)
 - Staff at every facility have CDLs
 - Trained forklift operators (staff and inmates)
- Approximately 143,000 gallons of diesel stored at central processing location;

ESF 4. Firefighting

- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Limited skill levels on inmate crews;
 - Downed tree cleanup & debris cleanup
 - Chainsaw brigade
 - Flaggers
 - Maintenance
 - Mechanics
- ODF wildfire assistance camp;
 - Crews no longer in use since 2011
 - Equipment and “mobile camp” still exists and could be utilized
- Fire crews (can be deployed with responders & under supervision)
 - Trained to live in tents
 - Trained to live in fire response environment
 - Have own resources / supplies with them
- Two structural engineers on contract (one in south part of Oregon, one in northern);
- Certified tactical team / WMD (one in Oregon);
 - Specialty team (18 operators per team)
 - Training in line with law enforcement trained officers;
- Staging Areas could be located outside on DOC properties;
- Mobile Kitchen (Food prep for crews / personnel / housing);
 - USAR team support (at base camps)
 - Fire team support (at base camps)
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death
 - Peer counseling
 - Family death
 - CSIM counselors (ESS group) have lawyer/client privileges
 - Could be used in State ECC and other facilities for responder staff members
- Gang Task Force (could be tasked by State and used for security);
 - Not as prepared for Riot-type situations as police
 - Can be deputized to function as law enforcement
 - Provide security for firefighters and EMS
- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities

ESF 4. Firefighting

- DOC Facilities have generators and back-up fuel;
- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond
 - Very comprehensive plans for all scenarios
 - Plans exercised (and plans activated for many other scenarios routinely)

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;

DOC can go 2-3 days (realistically, at best) without staff relief for their own facilities;
 - Possibility some of DOC staff will walk off job in this event to care for families
 - DOC will be short staffed immediately after any event like this and may initially need assistance with their own tasks.
- Access to facilities West of Cascades.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

4 ESF-4 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once firefighting assets have been identified to meet the request, OEM will create an action and assign it to the specific State agencies to accomplish the task.

ODF and OSFM will provide a representative to the ECC who will be the primary point of contact for all ESF 4 needs. Both agencies maintain Agency Operations Centers (AOC) off site to specifically manage and coordinate their resources.

ODF is responsible for the prevention and suppression of wildfires on ODF protected lands, which includes all "classified forestland" (ORS 526.320) within "protection district boundaries" (ORS 477.225) in addition to all lands protected by contract or agreement (477.406). ODF does this work independent of the ESF planning document.

In the past, ODF has been called upon by the Governor's emergency declaration process to support all risk incidents, including wildfire suppression on non-ODF protected lands.

4.1 Objective

To coordinate and mobilize fire and emergency services resources, personnel and equipment; and to coordinate other State resources to support local governments in detecting and suppressing urban, rural and wildland fires after the impact of a Cascadia Subduction Zone earthquake and resulting tsunami.

4.2 Challenges

- Limited firefighting resources available;
- Multiple fire incidences occurring simultaneously;
- Available firefighting resources will be committed to other tasks (SAR, etc.);
- Damaged infrastructure hampering the ability to fight fires.

4.3 Assumptions

- Widespread and simultaneous Statewide fire incidents, over urban, rural and wildland areas;
- Many firefighting resources likely will be utilized for search and rescue of trapped persons and in the control and containment of HAZMAT;
- Fires will be occurring as a result of ruptured gas lines and electrical infrastructure damage;
- Fire mutual aid will be sharply limited within the affected areas as the event affects many jurisdictions simultaneously;
- Broken water supply lines, search and rescue operations, communication issues and lack of mobility due to damaged roadways will hamper fire response;
- All available local firefighting resources will be committed, or damaged. Additional help will be needed from around and beyond the State;
- Coordination and direction of the local efforts, including volunteers, will be required;
- Aerial attack by air tankers, helicopters, and smokejumpers may be essential in these situations. Helicopters will be scarce resources and useable airports will be congested;
- Wildland firefighting forces may be diverted to assist in the control of fires in rural and urban areas because of more urgent threats to life, property, and the environment, and due to shortages of urban firefighters required to respond to other types of emergencies;
- Fire resources will be tasked with a variety of missions, many of which will not directly relate to fire suppression.

4.4 ESF 4 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Available trained firefighting personnel and equipment.	▪ Additional structural and potentially wildland firefighters and equipment from non-impacted areas. ▪ Adequate equipment, personal protective equipment, and the ability to meet these responders needs for the impacted area. ▪ Tactical Communication Support. ▪ Fuel for responding vehicles. ▪ Accessible roadways. ▪ ESF 4 coordination to prioritize the use of limited assets.
Limited capability to access impacted areas.	▪ Coordination with ESF-1 to identify and prioritize accessible roadways and to support ESF-4 operations ▪ Aerial transportation of crews and equipment to impacted areas
Damaged water lines and hazardous power and gas lines impacting efficient ESF-4 response	▪ Prioritizing damage assessment and repair of infrastructure to maximize firefighting effectiveness. ▪ Identify alternative water sources and methods of utilization in the Operational Areas. ▪ Coordination with ESF-2 and ESF-12 to identify hazardous gas lines and areas of concern.

4.5 Concept of Operations

Hazard analysis indicates as a result of an earthquake and subsequent tsunami, it will ignite structural and potentially wildland wildfires across Western Oregon. Available firefighting personnel will be limited and equipment will be damaged or their abilities degraded due to lack of support infrastructure. Significant resources and qualified personnel from areas outside impacted areas will be needed, but transport of Statewide assets will be limited.

ESF-4 functions include but are not limited to:

- Oregon “Conflagration Act” (ORS 476.510 to 476-610) will be immediately called upon by the State Fire Marshal to activate local assets on behalf of the State, from cities not impacted by the event;
- Assist with the coordination of mutual aid;

ESF 4. Firefighting

- Firefighting operations will be managed using ICS. Situation and damage assessment information will be transmitted through established fire suppression intelligence channels to the State ECC and to federal partners;
- Coordinate with ESF-2 the utilization of communications systems for firefighting response;
- Support local fire departments with appropriate resources to include mobilizing and deploying firefighting teams and resources as needed. State and other local resources from outside the disaster area are committed through coordination with other agencies that have firefighting resources;
- Coordination for use of State wildland firefighting assets to support firefighting operations, when necessary;
- Provide coordination, technical assistance, and/or resources to detect and suppress urban, rural and wildland fires;
- Coordinate preposition response resources when it is apparent that firefighting resources will be necessary;
- Coordinate relocation of firefighting resources when it is apparent that they are endangered by the likely impacts of the emergency situation;
- Coordinate with ESF-1, ESF-13, and local response to provide crowd control, security measures, roadway assessments, and ingress/egress actions to protect the public and property in, near and around areas involved in firefighting operations;
- Coordination with ESF-10 to keep responders informed of hazardous material in response areas;
- Coordinate with ESF-3 and ESF -12 to address fire prevention and suppression problems (i.e. leaking natural gas, downed power lines, water flow problems, etc.) ;
- Coordinate with ESF -1 for use of ODOT assets to support firefighting operations, when requested;
- Submit requests through EMAC for response beyond the State's capabilities.

5 Supporting Documents

- National Response Framework, ESF 4 – Firefighting
- County ESF 4 Annexes
- County Community Wildfire Protection Plans
- Master Cooperative Fire Protection Agreement
- State Fire Service Mobilization Plan
- "Conflagration Act" (ORS 476.510 to 476-610)

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 5 – Emergency Management

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ESF 5. Emergency Management

ESF 5 Tasked Agencies	
Primary Agency	Oregon Emergency Management (OEM)
Supporting Agencies	All Oregon Emergency Response System (OERS) Council Members as required Additional State Agencies as needed by situation
Adjunct Agencies	American Red Cross (ARC) Oregon Voluntary Organizations Active in Disasters (ORVOAD)

1 Purpose

ESF 5 supports and coordinates overall activities of State agencies for emergency management.

2 Scope

ESF 5 serves as the support for all State agencies, local and tribal governments, and non-governmental organizations across the spectrum of domestic incident management from prevention to response and recovery.

- Notifies the State emergency management organization and activates State Emergency Coordination Center (ECC).
- Activities include those functions that are critical to support and facilitate planning and coordination for operations involving major incidents and/or disasters. This includes alert and notification, ECC staffing, coordination of operations, logistics and materials, direction and control, information management, facilitation of requests for State assistance, resource acquisition and management, financial management, and other support as required.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Oregon Emergency Management

Priorities

- Safety of staff and their families;
- Determine safety of facility;
- Set up and begin operations of Emergency Coordination Center;
- Establish communication with Oregon Counties' Emergency Management.

Assets

- The Oregon ECC is located at the OEM facility in Salem;
- Radio assets:
 - Provides voice and digital communications via a packet network for the State ECC to Oregon counties using HF and VHF communications.

ESF 5. Emergency Management

- Has provided VHF and HF digital messaging equipment to Oregon County EOCs; currently it is operational in 34 of 36 of counties.
- Coordination of approximately 800-1,000 credentialed and background checked Amateur Radio volunteers in the State.
- Volunteers can be pulled from locations around the State to assist with communications at the State ECC if needed.
- OEM has interoperable communications ability with OSP and ODOT.
- OEM has communication equipment and protocols to connect to FEMA Region X in Bothell, WA and in Washington, DC.
- OEM can communicate with Civil Air Patrol aircraft and the FEMA AOC.
- COOP trailer generator capable of approx. 24 hours of operation without fuel resupply.
- **OERS:**
The purpose of the Oregon Emergency Response System (OERS) is to coordinate and manage State resources in response to natural and technological emergencies and civil unrest involving multi-jurisdictional cooperation between all levels of government and the private sector.
 - OERS is the primary point of contact by which any public agency provides the State notification of an emergency or disaster, or requests access to State or federal resources.
 - OERS was established to improve communications and coordination between government agencies responding to hazardous materials incidents across the State.
 - Local public safety agencies such as law enforcement, fire and emergency medical services normally provide the first response to an incident. Access to this local assistance is through 9-1-1.
 - Once notified, local public safety agencies would call OERS at 800-452-0311 or Salem Area 503-378-6377. If necessary, responsible parties would then call the National Response Center at 800-424-8802.
- COOP sites have been identified in areas surrounding Salem to continue operations in the event of damages to OEM facilities;
- OEM also will have operational by 2013 a COOP trailer capable of providing support to an incident;
- OEM has two 4wd vehicles and a sedan.

Capabilities

- Execute the policy of the Governor to establish, maintain, and implement an emergency services system in the State of Oregon in accordance with ORS 401.025 through 401.990;
- Provides local government and industry with a single point of contact to obtain the assistance of any State emergency response agency 24 hours a day, 7 days a week;

ESF 5. Emergency Management

- Coordinates with local jurisdictions the development and maintenance of city and county emergency operations plans;
- Coordinate emergency management activities and support acquisition and assignment of State resources for domestic incident management;
- Activate the State Emergency Coordination Center, and determine at what level the activation will occur;
- Notify agencies of activation and maintain Statewide situation reports;
- Communicate with FEMA regarding incident activities, and coordinate process for declarations within the State of Oregon;
- Perform other actions as necessary and pertinent to the missions of State-level emergency management.

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;
- Identified as being built on liquefiable soils, there is potential for State ECC to be damaged in the earthquake;
- OEM leadership and staff may be unable to reach State ECC due to transportation damages.

Support Needed Immediately After A Catastrophic Event

- Would likely require additional ICS trained personnel from outside of the State;
- Power and communications;
- Repair or replacement of damaged communications and computer equipment;
- Assessment of OEM facility for safety;
- Fuel for generators at State ECC;
- Food, water for responding staff at State ECC;
- Fuel and transportation for COOP trailer if necessary;
- Fuel or transport to work locations;
- Communications and IT equipment and trained personnel.

3.2 Support Agencies

3.2.1 OERS Council Members

All agencies participating in the Oregon Emergency Response System Council are directed to provide cooperative assistance within their resources and authority to other agencies, including but not limited to federal, State, county, city, special districts, and tribal entities in responding to or mitigating hazards that threaten the State of Oregon, pending further directives of the Governor.

Department of Administrative Services	Department of Fish and Wildlife
Department of Consumer and Business Services	Department of Energy

ESF 5. Emergency Management

Department of Environmental Quality	Department of Transportation
Department of Human Services	Oregon Housing and Community Services
Department of Geology and Mineral Industries	Oregon Military Department
Department of Justice	Office of the State Fire Marshal
Department of State Lands	Oregon State Police
Oregon Business Development Department	Public Utility Commission
Department of Agriculture	Water Resources Department
Department of Forestry	Department of Aviation
Department of Corrections	Department of Education
Parks and Recreation Department	Oregon Health Authority

3.3 Adjunct Agencies

3.3.1 American Red Cross

See ESF-6 and ESF-8 for more ARC CSZ information

The American Red Cross uses both volunteers and staff to:

- Life and safety of staff and public;
- Mass care of survivors;
- Provide and support sheltering, feeding, distribution of emergency supplies, supporting the bio-medical needs of impacted communities;
- Support responder and survivor information needs – where survivors can find assistance;
- Work with the Governor’s office for transition to long term recovery;
- Help people prevent, prepare for and respond to emergencies;
- Provide reliable, safe blood products.

3.3.2 ORVOAD

ORVOAD functions may include animal control, building repair, child care, clean up, clothing, communication, counseling, damage assessment, disaster welfare inquiry, financial assistance, food, human relations, mass care, sheltering, transportation, volunteer staffing, and warehousing and bulk distribution.

4 Concept of Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Emergency Management assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

ESF 5. Emergency Management

5 Supporting Documents

- National Response Framework, ESF 5 – Emergency Management
- County ESF 5 Annexes
- OERS

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 6 – Mass Care, Emergency Assistance, Housing and Human Services

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ESF 6. Mass Care, Emergency Services, Housing & Human Services

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ESF 6. Mass Care, Emergency Services, Housing & Human Services

ESF 6 Tasked Agencies	
Primary Agency	Department of Human Services (DHS)/Oregon Health Authority
Supporting Agencies	Department of Administrative Services Oregon Department of Agriculture Oregon Emergency Management (OEM) Oregon Housing and Community Services Department (OHCS) Oregon Military Department (OMD)
Adjunct Agencies	Oregon Voluntary Organizations Active in Disaster (ORVOAD) American Red Cross (ARC) Oregon Food Bank Southern Baptist Convention Oregon Department of Corrections (DOC)

1 Purpose

ESF 6 monitors and coordinates State support for the efforts of local and tribal governments, and nongovernmental organizations to address the housing, feeding, and human services needs of people impacted by a Cascadia Subduction Zone earthquake and resulting tsunami.

Related activities that support the implementation of ESF 6 may be found in ESFs 1, 2, 3, 7, 8, 11, and 15.

2 Scope

- Mass care includes sheltering, feeding operations, emergency first aid, bulk distribution of emergency items, and collecting and providing information on those affected by the disaster to family members;
- Emergency assistance strives to see that immediate needs beyond the scope of mass care are addressed. This includes efforts to reunite families; provision of aid and services to vulnerable populations; efforts to accommodate household pets and service animals; and coordination of voluntary agency assistance. It also includes the management and distribution of donated goods;
- Housing involves providing short-term, interim, and long-term homes for those affected by the disaster. It may include rental assistance, repairs, loans, manufactured housing, semi-permanent and permanent construction, referrals, identification and provision of accessible housing, and access to other sources of housing assistance;
- Human services includes the implementation of disaster assistance programs to help those affected by the disaster recover their non-housing losses, including programs to replace destroyed personal property, obtain disaster loans, food stamps, disaster unemployment assistance, disaster legal services, veterans' assistance, support and services for vulnerable populations, and processing of other State and federal benefit claims;
- ESF 6 includes the FEMA Individuals and Households Program (IHP), including Other Needs Assistance (ONA). IHP and ONA cover several of the categories of assistance noted above.

ESF 6. Mass Care, Emergency Services, Housing & Human Services

3 Roles and Responsibilities

3.1 Primary Agency

3.1.1 Department of Human Services

The Oregon Department of Human Services is the overall lead for ESF 6, including vulnerable populations. Under a Presidential Individual Assistance declaration, it may provide a State Individual Assistance Officer (State IAO). In addition to facilitating the activity of ESF 6 partners, DHS/OHA will activate certain activities related to children's services, senior services, and disability services programs.

Priorities

- It is expected that employees will take care of themselves and their families first and then report for work;
- Upon establishment of safe and usable facilities, DHS will conduct mission critical services:
 - Child Protection Services – Screening, assessment and placement.
 - Foster/Substitute Care – Child Welfare and Developmentally Disabled: Certification, interstate compacts, contracting for emergency placement.
 - Children Intensive In-Home Services – Provide service coordination, provider payments, in-home services, and transportation.
 - Family Based Services – In home services and transportation.
 - Adult Protective Services – screening, assessment, and placement.
 - Long Term Care Services (Community Based Care Services, In-Home Services, Nursing Facilities).

Assets

- The DHS office in Salem serves as the headquarters for the agency. DHS has field services located throughout Oregon in each of the 36 counties;
- No hard assets other than personnel. Oregon Department of Human Services employs ¼ of the State's personnel. If personnel are not needed by their specific department, they can be loaned to assist any other State agency if manpower is needed;
- Have Satellite phones at main office (Salem) and at regional offices;
- Maintains current mission critical Business Continuity Plans for all of the State programs that are managed and provided through the Oregon Department of Human Services and the Department of Public Health;
- Have health & safety officers who determine the safety and security of the >200 offices in the State's 36 counties that houses DHS employees and clients;
- Has Community Action Teams and Community Solutions Teams that work with VOADs to help people needing ESF-6 assistance;
- Administration for DHS and OHA is one in the same. Response programs for both falls under the same administration and in some cases work in a symbiotic

ESF 6. Mass Care, Emergency Services, Housing & Human Services

relationship with each other to provide disaster programs for public health, housing and recovery essential programs;

Capabilities

- DHS leads the State Disaster Housing Task Force;
- Participates heavily with the Governor's Office on Recovery, the State of Oregon, and the Federal Government during recovery planning and implementation;

Manages and leads the **Disaster Housing Task Force** which covers:

- Surveys disaster area and can identify affordable housing and assistance to those who need homes;
- Identifies and maps affordable housing throughout the State;
- Can seek waivers on income limits and rent limits to provide housing for survivors of disasters not receiving assistance prior to event;
- Provides foreclosure counseling to regional housing centers around Oregon;
- Manages a home purchase program which provides bond financing to help lower income people purchase homes and down payments systems;
- Allocate and manage grants, loans and assistance for consumers on some tax issues.

Manages and leads the **Housing and Community Development – Community Services Division**.

- Provides funding for development and operation of housing and shelters;
- Various (limited) food bank and food money programs;
- Manages the Disaster Supplemental Nutrition and Assistance Program (DSNAP);
- Emergency housing program for those facing eviction or homeless due to disastrous event;
- Works in partnership with the American Red Cross, OR-VOAD, and Oregon Food Bank in providing shelters and food where needed;
- Can provide educational programs and outreach on nutrition education, homeowner classes to buyers, and how to weatherize homes;
- Assistance to those facing utility shut-off.

DHS Divisions

Maternal and Child Health (MCH)

Preparedness

- Develops a plan for emergency preparedness among maternal and child populations;
- Develops or coordinates training for local nurses who work with maternal and child populations, including breastfeeding and lactation management during emergencies;
- Identifies specific needs of pregnant women, infants and children and educates families.

Response

- Coordinates the Family Health MCH preparedness plan with the base plan;

ESF 6. Mass Care, Emergency Services, Housing & Human Services

- Identifies specific risks or issues for pregnant women, infants, and young children, and recommends appropriate interventions;
- Develops a plan to identify, locate, and assure adequate communication with these populations during an emergency;
- Coordinates breastfeeding support. When necessary, OFH will assist in securing large quantities of infant formula;
- Assists local health departments in monitoring response to specific interventions;
- Works with appropriate medical and public health professionals to determine when it is safe for pregnant or nursing mothers, infants and children to reoccupy residences and businesses;
- Provides clean up and recovery consultation to local public health staff as needed;
- Works with appropriate medical and public health professionals to provide an assessment of long-term effects from acute exposures and revises training and communications as indicated;
- Works with appropriate medical and public health professionals to assess ongoing effects on infants and children, recommends interventions, monitors response to interventions, and makes referrals to appropriate health and social services, for those with long-term effects of exposure;
- Helps local public health staff identify sensitive populations and assure accurate and effective communication of risk to pregnant women, infants or children and recovery services, e.g. shelters and food supplies.

Office of Multicultural Health

Preparedness

- Develops relationships with multicultural community members and groups to aid in communication of emergency information when necessary.

Response

- Acts as subject matter expert on the development of linguistically and culturally appropriate messages for the public;
- Helps monitor community response to ensure risk-related messages are understood.

Recovery

- Participates in establishing and assuring safe return of people to homes and businesses.

Seniors and Persons with Disabilities Division

- The Seniors and People with Disabilities (SPD) Division is responsible for planning and responding to emergencies that involve the health and safety of seniors and people with physical and developmental disabilities.

Addiction and Mental Health Division

Addictions & Mental Health Division of DHS coordinates these efforts. However they do NOT provide counselors or counseling services. They coordinate these support efforts, much like Public Health works with hospitals.

Preparedness

ESF 6. Mass Care, Emergency Services, Housing & Human Services

- Maintains a Behavioral Health Emergency Response Coordinating Team (BHERT) which provides oversight for the behavioral health all-hazards planning and response;
- Develops Statewide plans, which address internal lines of authority, action for both preparedness and response, and communication with partner agencies;
- Oversees development of the clinical intervention standards;
- Ensures plans for the State hospitals are in place for the evacuation of patients and for receiving inpatients from hospitals in affected areas if needed;
- Identifies, coordinates, and if necessary, develops emergency response training for behavioral health staff and volunteers;
- Provides planning guidance for Community Mental Health Programs (CMHPs);
- Ensures that disaster preparedness educational material is available for those with psychiatric disabilities, including how to access behavioral health-related resources following an incident.

Response

- Develops and implements guidelines for core clinical care activities as well as a system of delivery;
- Determines the intervention standards or expected protocol;
- Coordinates logistics of behavioral health activities;
- Performs outreach activity, including provision of relevant and accurate information to the Public Information Officer (PIO), case-finding activities, and promotion of individual and community resilience.

Recovery

- Develops and implements a plan for addressing ongoing and/or long-term behavioral health needs.

Children, Adults, and Families Division

- The Children, Adults and Families (CAF) Division is responsible for planning and responding to emergencies that involve the health and safety of children and for the administration of benefit claims during disaster situations.

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;
- State Human Services Programs need power to function. All information and data bases are maintained electronically to provide available needs programs during an event;
- Damaged communications will impact response;
- Road and utility infrastructure damage will delay response;
- At the State and local regional levels, DHS will need safe, secure, accessible and powered facilities to be able to function and maintain residents' accessibility to the available State programs.

ESF 6. Mass Care, Emergency Services, Housing & Human Services

Support Needed Immediately Following A Catastrophic Event

- Safe and secure facilities for employees to work, both at the State office (in Salem) and in regional offices throughout the State.
- Dependent on normal communications (phone and internet), and power to be functional, will need communications and generator for facilities throughout Oregon;
- Fuel for generators and transportation support to get assistance to impacted areas;
- Will likely need additional trained personnel and funding to take on additional ESF-6 support missions;
- Will need basics of water, food, and shelter to maintain response and to fulfill mission tasks.

3.2 Support Agencies

3.2.1 Oregon Housing and Community Services Department

Provides financial and program support to create and preserve opportunities for quality, affordable housing for Oregonians of lower and moderate income. OHCS administers federal and State antipoverty, homeless and energy assistance, and community service programs. OHCS leads the State Disaster Housing Task Force.

Priorities

- Account for OHCS personnel;
- Ensure agency essential and critical business functions are operational;
- As requested by ESF 6, convene Disaster Housing Task Force and work with ESF-6 partners to get information on extent and location of damage and the numbers of people affected;
- Coordinate and assist local jurisdictions with identification of affordable housing near those areas to relocate survivors.

Assets

- OHCS has one office in Salem, as well as five regional advisors serving: The Willamette Valley Region, Eastern Oregon Region, Central Oregon Region, Southwest Oregon Region and the Portland Metro/Northwest Oregon Region.
 - The Regional Advisors to the Department (RADs) provide outreach to Oregon communities in identifying and addressing critical community development activities. RADs help communities to build capacity, finance affordable housing developments, and advocate and provide information to local communities and governments, in the siting of affordable and special needs housing projects.
- There are three divisions in OHCS:
 - Policy, Strategy & Community Engagement
 - Business Operations
 - Program Delivery

ESF 6. Mass Care, Emergency Services, Housing & Human Services

Capabilities

- Provide financial and program support for quality, affordable housing and supportive services for moderate, low, and very-low income Oregonians;
- Can assist in locating vacancies in affordable housing developments which can be made available to low income households following a disaster where housing is an issue. Based upon availability of resources, OHCS can provide financing programs and certain grant funds relevant to housing during a long-term recovery process;
- OHCS works in cooperation with DLCD, who can direct the waiver of certain land use rules and regulations (e.g., allow development outside of an urban growth boundary).

Likely Mission Tasks

- If requested, provide a liaison to the State ECC for ESF-6;
- OHCS requests waivers from HUD and the IRS program regulations relating to income and rent limitations to better meet the housing needs of survivors;
- Assist in relocation of evacuees by identifying affordable housing developments in proximity of the affected area ;
- Can provide contact information of affordable housing and community service partners;
- Assist with locating affordable housing targeted for special needs populations;
- Depending on availability of resources, can provide funding through local community action agencies or other partners for programs that provide:
 - Emergency shelter,
 - Transitional housing and supportive services to persons who are homeless or at risk of homelessness.
- Additional programs can include rental assistance, refundable security deposits, energy and weatherization assistance;
- Oregon Commission for Voluntary Action & Service (OCVAS) promotes and supports AmeriCorps, volunteerism and civic engagement to strengthen Oregon communities.

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;
- OHCS may need waivers on Federal requirements and assistance for paying rental assistance contracts and paying construction contracts;
- Concern over agency finances with loss of homes and increased loans being made to rehabilitate homes;

Support Needed Immediately After a Catastrophic Event

- OHCS is completely dependent on communications (phone and internet) and power to be functional;
- No backup communications or power at facility;

ESF 6. Mass Care, Emergency Services, Housing & Human Services

- May need additional trained personnel and funding to take on additional housing needs.

3.2.2 Oregon Emergency Management

See ESF-5 for more OEM CSZ information

Capabilities

- Oregon Emergency Management (OEM) provides a liaison to assist in coordination of ESF-6 in the State ECC, and at a JFO, if applicable. If not provided by Oregon DHS, OEM may be asked to provide a State Individual Assistance Officer (State IAO);
- OEM has the State lead for donations management, including administering the Aidmatrix software utilized by Oregon as part of the National Donations Management Network.

3.2.3 Oregon Military Department

See ESF-7 for more OMD CSZ information

Capabilities

- OMD Military Support to Civilian Authorities may be asked to assist in temporary housing and feeding activities;
- OMD has tents for mass housing, but those would likely be used for own response use;
- Can provide limited transportation assistance to survivors including medical transportation or non-standard platform medevac;
- Armories could provide transient housing for displaced populations;
- OMD Chaplains could provide mental health counseling for survivors and responders;
- Contracting support to provide feeding assistance;
- Could provide shelter security.

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.
- Accessibility to fuel resources;
- Limited petroleum storage;
- Limited ambulatory capacity;
- Damaged communications will impact response;
- Road and utility infrastructure damage will delay response.

ESF 6. Mass Care, Emergency Services, Housing & Human Services

Support Needed Immediately After A Catastrophic Event

- Mass sheltering facilities and support to establish mass care (Title 10 USAF resource, regionally based California, Montana, Washington);
- Diesel and gasoline fuels, to include transit and storage of fuels;
- Personnel and equipment to support ESF-6 operations;
- Additional vehicles and operators;
- Heavy lift rotary aircraft;
- Fixed wing aircraft.

3.2.4 Department of Administrative Services

See ESF-7 for additional DAS CSZ information

DAS assists with the management of donated goods, especially with regard to any warehouses which are needed to temporarily store donated goods before they are delivered to end users.

3.2.5 Oregon Department of Agriculture

ODA Divisions with ESF-6 responsibilities

The **Animal Health and Identification Division** provides veterinarian services to control and eradicate animal diseases, especially those transmissible to humans, livestock and birds. The Animal Health and Identification Division provides guidance and assistance to local jurisdictions for response to disasters that involve domestic animals.

Priorities

- Human health is primary priority , animal health is secondary priority;
- Damage assessment and staffing of the agency AOC;
- Establish essential communications;
- Coordination with other ESF-6 agencies on location of animal shelters;
- Response to distressed animals and/or diseases affecting domestic animals;
- Coordinate with federal partners regarding food safety and animal health issues for survivors.

Assets

- Agency has own AOC for emergency operations and will send a liaison to the State ECC;
- State staff of three veterinarians;
- Field Staff – approximately 240 (some of this number is seasonal) – brand inspectors who document testing that is done on livestock so that they can be shipped in and out of State to sustain quality control and commerce capability;
- Team of 125 – 150 private veterinarians that have been credentialed and trained in ICS response that can be called upon to assist. These team members are under contract with the Department of Agriculture;
 - Staff has ability to work remotely throughout the State if need be.
- Have MOU's with veterinarians Statewide to increase assistance capability;

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- Four animal response trailers located throughout the State used to provide a variety of domestic and livestock animal assistance;
- Two livestock trailers that haul mobile corrals;
- Coordination with Oregon State University to provide responders for disease control (students);
- Have livestock sheltering areas east of the Cascades. Have data to be able to establish alternate private land livestock sheltering capabilities.

Capabilities

- Can assist in determining the location of supplies of food for human survivors; assists with information on food and food safety issues;
- ODA Animal Health and Identification Division(ODA/AHID) will serve as the lead support agency working with local jurisdictions in issues involving evacuation, shelter and care of companion animals, service animals and livestock;
- Assists in coordination of integrated response to provide for the safety and well-being of household pets and livestock;
- May help coordinate resources for animal shelters;
- Provide State, local and private agencies with response and support capabilities for the evacuation, shelter and care of domestic animals;
- Coordinate and support VMAT teams that respond nationally;
- Work closely with USDA APHIS (Animal and Plant Health Inspection Service) to coordinate veterinary service as it relates to plant and animal disease outbreaks;
- Can assist in determining safe disposal sites for dead animals.

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 Two thirds of ODA staff is located west of the Cascades. This scenario may impact their ability to respond;
- It is very unlikely that response to this kind of incident can be done with the current amount of equipment and personnel. ODA can sustain basic operations for only three to four days with current staffing;
- Communications capabilities (HAM, Satellite phones, interoperable radios) will be needed by ODA and its field staff;
- Human shelter policies could impact locations and operations of animal shelters.

Support Needed Immediately After A Catastrophic Event

- Veterinarian response teams from out of State ;
- ODA Field teams will require fuel and road access to areas as needed;
- Department of Agriculture building in Salem will need generator power. Building is wired for generator use, however there is no generator;
- Potable water to support responders and animal sheltering;
- Limited radio communication;

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- No HAM radio communication;
- Fuel needed for animal carcass disposal, and disposal of contaminated feed.

The **Food Safety Division's** team of field inspectors and staff license and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption. This includes shellfish harvesting, dairy, retail grocers, bakeries, non-alcoholic beverages, custom meat, eggs, warehouses and food manufacturing. ODA coordinates with the State Health Officer on milk and other food products in commerce in response to nuclear incidents and works closely with the Oregon OHA in response to all food emergencies.

Priorities

- Human health is primary priority , animal health is secondary priority;
- Water testing of private wells being used as a water source for industrial food processing.

Assets

- Have resources to assist county and State Health Departments with food safety issues;
- Have Statewide contact list for food producers and licenses.

Capabilities

- Provide expertise in determining the safety of sundry food supplies from grocery stores that are not perishable or contaminated to augment sheltering food needs;
- License and contact information for food processors, warehouses, grocery stores, delis, bottled water, milk producers, and dairies;
- Contract with FDA for inspections of food safety;
- Investigate food safety issues – and recalls;
- Responsible for activating FERN (Food Emergency Response Network) and CCAP (Chemistry Cooperative Agreement Program) laboratories.

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. Two thirds of ODA staff is located west of the Cascades. This scenario may impact their ability to respond;
- It is very unlikely that response to this kind of incident can be done with the current amount of equipment and inspecting personnel;
- Human shelter policies could impact locations and operations of animal shelters;
- Will not have the capability of testing and verifying the safe handling of foods for human or animal consumption being brought into the impacted area from outside of the State. This quality assurance will have to be done prior to being used in Oregon.

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Support Needed Immediately After A Catastrophic Event

- Additional inspection personnel from outside of the impacted areas;
- Likely that laboratories and sampling equipment will be damaged, replacement capacity to inspect safety of food supply will be needed;
- Communications capabilities (HAM, Satellite phones, interoperable radios) will be needed by ODA and its field staff;
- Fuel for responders and generators.

Laboratory facilities provides analysis for food and dairy samples, animal diseases, animal feeds, shellfish, fertilizer, water, plant pest and disease, pesticides, and market assurance analysis.

Assets

- Two food testing laboratories in Oregon:
 - Lab in Salem for inspection and testing prior to shipping in and out of State;
 - Lab for inspection and testing prior to shipping overseas is in Naito Parkway, Portland.

Capabilities

- Can assist the Department of Health with testing drinking water resources, as needed.

Support Needed Immediately After A Catastrophic Event

- Additional personnel from outside of the impacted areas;
- Likely that laboratories and sampling equipment will be damaged, replacement capacity to inspect safety of food supply will be needed;
- Communications capabilities (HAM, Satellite phones, interoperable radios) will be needed by ODA and its field staff;
- Fuel for responders and generators.

The **Natural Resources Division's** mission is to conserve, protect, and develop natural resources on public and private lands. Primary program areas include: water quality, confined animal feeding operations, smoke management, land use, and Soil and Water Conservation Districts.

Capabilities

- Conduct water sampling in holding ponds, perk ponds, bottled water, and from private well sources;
- Sampling of Confined Animal Feeding Operations (CAFO) for water quality of State waterways;
- Can assist county Health Departments with water testing.

Support Needed Immediately After A Catastrophic Event

- Additional personnel from outside of the impacted areas;
- Likely that laboratories and sampling equipment will be damaged, replacement capacity to inspect safety of food supply will be needed;

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- Communications capabilities (HAM, Satellite phones, interoperable radios) will be needed by ODA and its field staff;
- Fuel for responders and generators.

3.3 Adjunct Agencies

3.3.1 Oregon Voluntary Organizations Active in Disaster

- ORVOAD consists of voluntary organizations with disaster relief roles, which work in partnership with State, local, and tribal governments;
- ORVOAD Functions may include animal control, building repair, child care, clean up, clothing, communication, counseling, damage assessment, disaster welfare inquiry, financial assistance, food, human relations, mass care, sheltering, transportation, volunteer staffing, and warehousing and bulk distribution;
- ORVOAD is a member of the larger family of State VOADS, under a national umbrella known as NVOAD (National Voluntary Organizations Active in Disaster). The American Red Cross and Oregon Food Bank, detailed as follows, are member agencies of ORVOAD;
- ORVOAD serves as a liaison to the State ECC to coordinate member operations with other ESF-6 agencies.

3.3.2 American Red Cross

Priorities

- Life and safety of staff and public;
- Mass care of survivors;
- Provide and support sheltering, feeding, distribution of emergency supplies, supporting the bio-medical needs of impacted communities;
- Support responder and survivor information needs – where survivors can find assistance;
- Work with the Governor's office for transition to long term recovery.

Assets

Within the State of Oregon, the American Red Cross has five chapters that provide

Program and Services:

- **Oregon Trail Chapter:** *Serving Baker, Clackamas, Clatsop, Columbia, Hood River, Gilliam, Morrow, Multnomah, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington and Yamhill Counties.* Oregon Trail Chapter serves as the lead chapter for the State of Oregon.
- **Oregon Mountain River Chapter:** *Serving Crook, Deschutes, Grant, Harney, Jefferson and Wheeler counties and Warm Springs Reservation.*



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- **Oregon Pacific Chapter:** *Serving Benton, Coos, Douglas, Lane and Linn Counties.*
- **Southern Oregon Chapter:** *Serving Curry, Jackson, Josephine, Klamath and Lake Counties.*
- **Willamette Chapter:** *Serving Lincoln, Marion and Polk Counties.*
- 12 supply caches, mostly trailers, across the coastal communities, staged out of the inundation zone in earthquake resilient buildings;
- National ARC caches are available to mobilize as needed;
- 100 person shelter set up, 100 cots, 200 blankets, administrative supplies to support shelter set up and occupation, basic first aid health items, and personal hygiene items per cache;
- MRE's in pre staged areas, however are in buildings of questionable integrity for large magnitude earthquake;
- ARC is capable of providing tent sheltering if no buildings meet their safety, security, and accessible criteria;
- 40 caches (trailers) each capable of providing shelter for 100 people, in the State of Oregon, up and down the I-5 Corridor. The bulk of supplies are in utility trailers 18 – 20 feet long. Can be moved by semi-trucks. These trailers contain non-perishable items;
- Reno, NV and the Umatilla Chemical Depot are large fixed site storage areas for disaster field supplies which includes mass care supplies. Inventory fluxes during the year with multiple disaster declarations and the need to ship out the supplies. These two storage areas have current contracts with common carriers already in place;
- Some MOU's exist with school districts.;Six Emergency Response Vehicles (ERV's) in the State;
- Five 4wd SUV's;
- One EKRK – Emergency Kitchen Response Vehicle (Portland);
- Capable of heating and serving 250 meals 3 x per day.
- Amateur Radio (Ham) equipment in Chapter offices and some of the sheltering trailers;
- ARC – has MOU's with Amateur Radio Emergency Services (ARES) to provide communications;
- ARC – emergency response vehicle has radio capabilities, however it is line of sight – no repeater capability. ARC has its own dedicated National Red Cross radio frequency (4742). Radio Base Station is in the ARC office in Salem;
- Two Satellite radios in the State – One in Salem office and one in Lincoln County;
- ARC Office in Salem has a PACKET radio;
- ARC offers PIO's to interface and work with JIC for public messaging regarding sheltering and assistance;
- Two Joint Information Centers in Salem – one at Chemeketa Community College and one with CCTV;

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- MOU with FEMA agreement for resource tracking and planning;
- ARC Blood Center (Portland) processes and distributes 90% of the blood supply in Oregon. Have a national testing lab by Portland Airport.

Capabilities

- The ARC can expand its operations as a disaster requires;
- ARC is involved in distribution of emergency relief items, and case management, at its service delivery sites;
- Red Cross Health Services volunteers coordinate their efforts with those of the local health authorities and the medical and nursing communities. When staffing a shelter, dependent on staffing resources, a Red Cross Health Services nurse will be assigned. Health Services responsibilities carried out in any Red Cross facility are supervised by a Red Cross nurse, in consultation with a physician. Nurses, paraprofessional health care personnel and other personnel with acceptable first aid training or experience will be used, commensurate with their abilities, to provide the necessary health services coverage to clients in the shelters;
- The ARC has developed relationships with local emergency program managers and coordinates its response with local governments, as well as providing a liaison to the State ECC;
- Maintains agreements with local, State, and national organizations that support State ESF 6 activities;
- ARC response staff can interface with State and volunteer teams to coordinate sheltering and feeding;
- Maintains partnerships with private organizations and corporations who have a disaster distribution system:
 - Wal-Mart
 - Fred Meyer
 - Home Depot
 - Lowes
 - Sysco
 - U.S. Foods
 - Budweiser Beer (canned water)
 - Miller Beer (canned water)
 - Walgreens / Safeway / Circle-K / Burger King
- Capable of providing handicapped accessible vehicles for evacuations;
- Life Safety and Asset Protection Function and Staff Wellness Activity for responders – law enforcement professionals and medical professionals combined look after the health and well-being of ARC volunteer staff;
- Mental health staff is available to ARC volunteer staff to assist with mental and emotional issues during this type of event;

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- Have agreements, MOU's and contracts with school districts, and faith based organizations that can provide mass feeding;
 - Southern Baptist Men's Convention provides disaster services mobile field kitchens for mass feeding.
 - Salvation Army assistance agreements.
 - Senior centers.
- Have agreements with faith based organizations and have identified facilities large enough to be used as shelters;
- In most instances – an automatic push of equipment and personnel begin to respond (push) to an accessible staging area;
- Can do medical screening for intake into general population shelters. The medical screening identifies people who may need functional needs support services for special needs and medical service;
 - Citizens who are medically fragile or need acute care will be referred to the Health Department for sheltering needs.
- Provides the 'Safe and Well' system for anyone who wishes to place their name in the database for friends and relatives who would be inquiring about their safety. This is a voluntary program available to disaster survivors;
- The 'Safe and Well' program and Red Cross feeding operations can be extended for those who wish to shelter in place or in neighborhood camps;
- Red Cross has a program to process and train spontaneous volunteers.

Catastrophic Event Operational Challenges

- Sheltering capabilities in the high impact coastal areas may be precarious and not feasible. Alternate sites will need to be assessed. Security requirements will be on an as needed basis and incident driven. In this case alternate sites need to be assessed and deemed safe and usable as possible shelters;
- Survivability of coastal supply caches is questionable;
- Survivability of coastal and usability of all pre-designated and approved shelters is questionable;
- Additional sheltering caches are needed throughout Oregon;
- Open air sheltering in the planned scenario (winter) will be a problem;
- Volunteer workers will be impacted by this event and the number of available workers will decrease exponentially;
- Need agreements with ODOT / OMD for transportation of life sustaining supplies;
- Evacuation shelter square footage requirement of 20 sq. ft. per person has been changed by the Oregon State Fire Marshal, who has implemented a new code mandate for the square footage per person minimum for sheltering to 35 sq. ft. per person. ARC will be requesting a variance or set-aside for this rule to maximize the facility space available in this event scenario;
- Health codes prohibit pets from entering a shelter. ARC works to co-locate pet care facilities next to shelters. ARC partners with other organizations to provide logistically close care and feeding for pets.

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Support Needed Immediately After A Catastrophic Event

- Fuel;
- Generators;
- Food distribution to shelter sites;
- Water distribution to shelter sites;
- Shelter and operational resupply via air or sea to areas unreachable by damaged roadways;
- Rapid assessments of pre-designated sheltering sites in the impacted areas for safety;
- Accessible roadways into the impacted areas;
- Supplies to support special needs and medical needs at shelters (medications);
- Additional trained personnel;
- Pre-determined staging areas for this event to enable an immediate 'push' of personnel and supplies.

3.3.3 Oregon Food Bank

- Oregon Food Bank is the hub of a Statewide network of twenty regional food banks across Oregon and Clark County, Washington, distributing food through 935 nonprofit agencies. During a disaster they distribute food through this network to affected areas.

3.3.4 Southern Baptist Convention

- The Southern Baptist Convention is not a member of ORVOAD, but may play a key role in conjunction with ARC and Oregon Food Bank in feeding people affected by large disaster events. Like many voluntary agencies, this organization can tap into resources available to it nationally.

3.3.5 Oregon Department of Corrections

Priorities

- First priority for all Oregon DOC facilities is to make themselves and their facilities whole and functional first. No assistance will be available to the response effort until this is complete (keep public safe by ensuring inmates stay inside);
 - Facilities are contained and able to get up to operational status without outside assistance.
 - May take one day to one week (longer in some situations) to get functional before they can help State and accept mission assignments.
- Must clear facility access paths and roads on site before they can even get to ingress/egress roads;
- Can take State mission assignments after prisons are secure and functional.

Capabilities

- Provide Central Distribution Center (CDC) as possible repository for national stockpile operations;

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- Each DOC facility has medical personnel to help injured at the facilities;
- Basic medical needs of inmates & staff are met on site at each facility.
- Clean-up crews (debris removal);
- Can provide temporary housing (Fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing.
- Provide equipment and operators;
 - Evacuations (moving people).
 - Trucks, bulldozers, other heavy equipment.
- Can possibly augment response with DOC fuel supplies.

Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations:
 - Semi-trucks (sleepers).
 - Also have refrigeration & dry good trucks.
 - Vehicles have manual fuel pumps on board.
 - Some earthmoving equipment (bulldozers, dump trucks).
 - Staff at every facility have CDLs.
 - Trained forklift operators (staff and inmates).
 - Buses.
- Approximately 143,000 gallons of diesel stored at central processing location;
- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Plumbing, carpentry and electricity (inmates);
 - Though felons cannot hold professional licenses, they can perform these duties with supervision.
 - Assist journeyman and licensed professionals – inmates trained to this level.
- ODF wildfire assistance camp;
 - Crews no longer in use since 2011.
 - Equipment and “mobile camp” still exists and could be utilized.
- Two structural engineers on contract (one in south part of Oregon, one in northern);
- Certified tactical team / WMD (one in Oregon);
 - Specialty team (18 operators per team).
 - More in line with law enforcement trained officers.
- Staging Areas could be located outside on DOC properties;
- Mass Care – Intake;

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- DOC personnel well trained for intake.
 - Intake personnel process 300+ inmates per week
 - Experts in Oregon for this task
 - DOC intake personnel are unarmed
- Mobile Kitchen (Food prep for crews / personnel / housing);
 - USAR team support (at base camps).
 - Fire team support (at base camps).
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death.
 - Peer counseling.
 - Family death.
 - CSIM counselors (ESS group) have lawyer/client privileges.
 - Could be used in State ECC and other facilities for responder staff members.
- Gang Task Force (could be tasked by State and used for security);
 - Not as prepared for riot-type situations as cops are.
 - Can be deputized to function as law enforcement.
 - Provide security for firefighters and EMS.
- ODC is self-sustaining for approx. 14 days (similar for all facilities);
 - Stores of salt, gravel, etc., to maintain their properties kept on site at prisons (but ingress/egress away from DOC facilities would need ESF #1 assistance).
 - Prisons keep food supplies for four days.
- DOC personnel are trained to be deployed to other DOC facilities;
- Has retiree cadre that could be called upon to assist with DOC operations;
- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities.
- DOC Facilities have generators and back-up fuel;
- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond.
 - Very comprehensive plans for all scenarios.
 - Plans exercised (and plans activated for many other scenarios routinely).

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;
- DOC can go 2-3 days (realistically, at best) without staff relief for their own facilities;

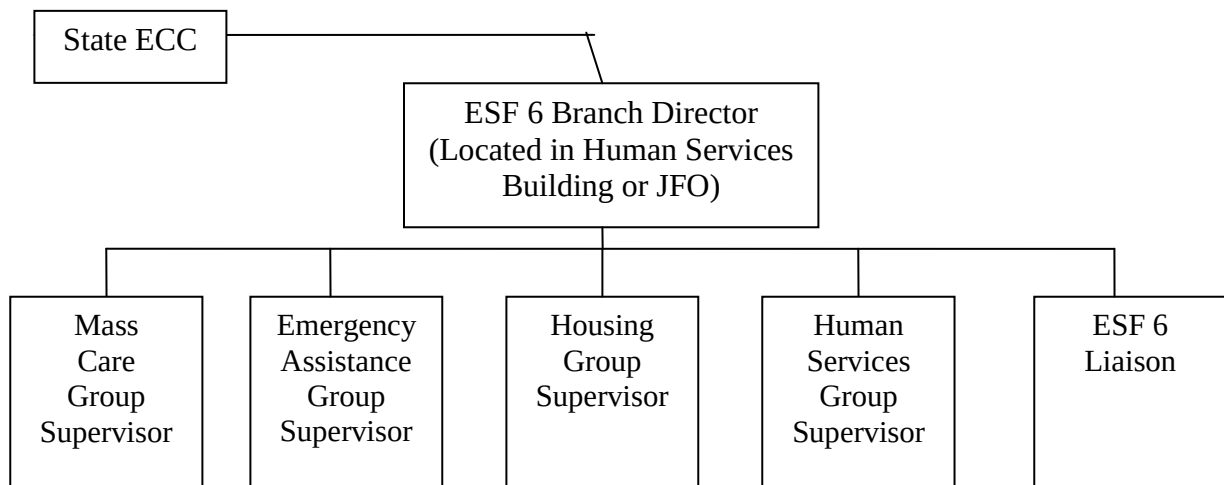
ESF 6. Mass Care, Emergency Services, Housing & Human Services

- Possibility some of DOC staff will walk off job in this event to care for families
- DOC will be short staffed immediately after any event like this and may initially need assistance with their own tasks.
- Access to facilities West of Cascades.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

4 ESF-6 Operations



ESF 6 is managed via the organization chart above:

The ESF 6 Liaison is physically located with the ESF 6 Branch Director, and helps to facilitate communication with other liaisons in the State ECC, with the Human Services Liaison in the Public Health Division AOC in Portland, the Disaster Case Management (DCM) Liaison in the Joint Field Office (JFO), and with local community contacts, as required.

4.1 Objective

To organize within State government the capability to meet basic human needs (shelter, food, clothing, inquiry, and emergency social services) in an earthquake disaster and to outline responsibility and policy established for Mass Care operations before, during, and after a disaster.

ESF 6. Mass Care, Emergency Services, Housing & Human Services

4.1.1 Challenges

The movement and delivery of resources and capabilities to meet the needs of disaster survivors;

Availability of emergency shelters and other temporary housing options (including accessible housing) for the affected population;

Providing for the safety and security of shelter and feeding sites with limited personnel;

Accounting for and accommodating special needs populations;

Coordination and validation of mass care needs with limited communication and access to impacted areas.

4.1.2 Planning Assumptions

- Because of damage to the transportation infrastructure, out-of-region mutual aid, State and federal resources, and resources from other States cannot begin to arrive for up to 72 hours or longer;
- Response activities begin without the benefit of detailed and complete situational or critical needs assessments;
- A large number of people will choose not to use shelters and will stay near their properties and become the shelter-in-place population;
- Aftershocks and other secondary effects of the earthquake event will cause additional damage and increase shelter populations over time;
- Local sheltering will be limited due to damage to facilities and lack of available personnel;
- Initial feeding and sheltering locations may not be sustainable for more than three days;
- Transitional Sheltering Assistance may be required in or near impacted communities (if shelters are expected to remain open longer than 14 days and service 15% of the impacted citizens, 10% pet ownership, and 20% individuals with access and function needs issues);
- Evacuation from impacted communities may be required. Host communities or host state protocols may need to be initiated.

4.1.3 ESF-6 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Shelter Management and Staff	▪ ESF-13 coordination for security of shelters and survivors. ▪ Pet Sheltering support (evac, sheltering, feeding, and first aid). ▪ Shelter assessment teams to ensure safety, hygiene and security. ▪ Evaluation of ad hoc shelters. ▪ Bulk distribution of survivor needs. ▪ Credentialing and management of

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	volunteers. Support for vulnerable populations in shelter system.
Food, water and other critical life sustaining commodities including licensed medical staff, medications, medical equipment and supplies.	- Coordination with ???? for logistical support to shelters. - ESF-6 coordination with local governments, VOAD and NGOs providing support to sheltering. - On-site feeding operations. - Mobile Kitchen coordination. - ADA support for accessibility. - First aid support. - Coordination with ESF- 8 on medical issues and supply of medical necessities for shelters and the public at large.
Evacuation/Reunification Support	- Evacuation/Reunification TF - Embarkation Support - Debarcation Support - Pet evacuation support

4.1.4 Concept of Operations

ESF-6 functions include but are not limited to:

- ESF-6 representatives will coordinate with State, federal, and nongovernmental organizations (NGOs) that have a role in mass care and sheltering operations;
- Shelter operations will be managed by a combination of government representatives, ARC, NGOs, and community groups (churches, etc.);
- Analyze situational information to determine the number of people requiring shelter and meals in impacted areas;
- Local emergency managers will coordinate to identify available facilities that could potentially be used for sheltering and provide the list to ESF-6 representatives in the county to be relayed to the State ECC;
- Local emergency managers will work with others in the community, in nearby areas, and with the State to identify:
 - Additional surviving and sustainable facilities for potential shelters.
 - Locations for open spaces to put up soft-sided facilities.
 - Locations for temporary housing sites.
- Coordinate aerial reconnaissance will begin for observation of damaged areas, including viewing the condition of pre-sited open areas, pre-identified facilities, and any other standing facilities that could serve as shelters;
- Coordination with ESF-15 and other means to broadcast shelter and feeding information to survivors;

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- Identify shortages and coordinate with Federal ESF-6 to determine what resources are available to support the State following the event;
- ESF-6 will coordinate with ESF-3 to inspect facilities for potential use for sheltering. Also coordinate the inspection of facilities to conduct structural safety inspections;
- Identify resources that can be transported by air and sea. Coordinate with ESF-1 to identify transportation requirements to support ESF-6;
- Coordination of the tasking of all sheltering activities, including the sheltering of people with special needs and the elderly;
- Coordination of immediate relief food supplies and as conditions allow transition, establish and operation of mass feeding facilities in impacted areas;
- Coordination with relief efforts provided by volunteer organizations performing mass care functions;
- Coordination with shelters on the establishment of a system providing shelter registration data to appropriate authorities;
- Coordination of the provision of emergency first aid in shelters and fixed feeding sites;
- Coordinate with ESF-8 provision of medical support exceeding that required for standard first aid, for the prevention of communicable diseases, to include epidemiological and environmental health activities, as related to sheltering and feeding of survivors;
- Coordinate with the Energy and Utilities ESF to ensure each shelter has power generation capabilities.

4.2 General Guidelines

ESF 6 is managed by a Branch Director, who also serves as the State Individual Assistance Officer (State IAO). Among several sources of federal assistance that may be available to the State IAO are the FEMA Individuals and Households Program (IHP), which includes Other Needs Assistance (ONA). IHP may apply across all four groups in ESF 6. ONA applies mostly to the Human Services Group.

4.2.1 Mass Care

The Mass Care Group Supervisor position will usually be filled by a State employee with support from the American Red Cross Liaison. Among the responsibilities of this Group are coordinating State resources in response to requests for support from local government in shelter and feeding operations, and provision of basic first aid at designated sites. This Group will usually have representatives from Oregon Food Bank and Oregon Voluntary Organizations Active in Disaster (ORVOAD).

The Mass Care Group also receives and coordinates requests for bulk distribution of emergency relief items, requests which are generally passed on to the Logistics Section of the State ECC. Resources are then provided by the Logistics Section, as appropriate. See also ESF 7 of this plan.

Several documents are available to assist in implementing the feeding portions of the work of the Mass Care Group. They are Appendix 1, Food and Feeding; the Multi-Agency Feeding Plan Template; and the Feeding Task Force Guidance Document.

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ARC has a database (the American Red Cross National Shelter System) which contains a list of facilities that could serve as shelter sites. This database is the primary system for reporting shelter information within the American Red Cross and the system can be accessed at the local, State, and federal government levels. ARC Liaisons will provide reports on ARC shelter activities. Reports regarding non-ARC shelter activities will primarily be tracked and reported by the local jurisdictions where the shelters are operating. FEMA also has a national shelter database called the National Shelter System (NSS). To date Oregon has not entered into an MOU with FEMA for State use of the FEMA NSS.

ARC provides basic first aid at ARC service delivery sites. Any medical services other than basic first aid will be requested through ESF 8.

ARC also provides basic mental health services at its service delivery sites. The American Red Cross has professional mental health volunteers who provide counseling services and make referral to community-based resources for short-term and long-term mental health care.

American Red Cross staff assists family reunification through the use of its Safe and Well website. The ARC provides targeted information in response to inquiries regarding at-risk populations. See also 4.1.2.

When local government authorities request assistance from the State¹ with shelter and feeding activities, the following general steps should be considered:

- Determine the extent of the area and population at risk, and designate other areas that are safe to provide temporary housing and feeding for evacuees and emergency workers (if necessary). This will require input from local government officials;
- Verify that a request for an ARC Liaison has been made and request a status report of current American Red Cross activities in support of the disaster;
- Information regarding special needs, evacuation routes used, and the location of staging (or “reception”) areas needs to be requested from the involved local government(s);
- The ARC Liaison will provide a list of American Red Cross shelter(s) that are open or on stand-by. The report will include physical address, capacity of the shelter(s), and information on ARC feeding operations;
- Organizations operating shelters will assign shelter managers and will be responsible for registering shelter occupants;
- The Mass Care Group Supervisor should notify the Public Information Officer (PIO) at the State ECC regarding the opening of shelters and their locations, and the locations of any additional and/or alternate staging areas that have been established to assign persons to shelters.

¹ The American Red Cross will generally know about evacuations that require sheltering before State resources are requested because individual ARC chapters are working with the involved local government(s).

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4.2.2 Emergency Assistance

The Emergency Assistance Group Supervisor position will usually be filled by Oregon DHS.

OEM will lead a Task Force within this Group to manage donated goods. DAS and ORVOAD assist in the work of this Task Force. Items donated by individuals, private or public groups are inventoried, managed and distributed in a manner to provide the appropriate goods to the affected citizens. For more information, see the State Donations Management Plan.

OEM will also provide a Voluntary Agency Liaison (VAL) to the Emergency Assistance Group. The VAL will be the primary liaison for State agencies with ORVOAD and other voluntary agencies, as well as local COAD². If long-term recovery committees are established following the event, the VAL will be the lead representative for the State with those committees.

The Emergency Assistance Group is also responsible for efforts to reunify family members and others who have become separated by the event. The “Safe and Well” website managed by the American Red Cross will serve as one method for conducting welfare information services. For additional information on Safe and Well, and other resources, see Appendix 2.

4.2.3 Housing

The Housing Group Supervisor position will usually be filled by Oregon Housing and Community Services. When this plan was published, OHCS was leading a State effort to develop an Oregon Disaster Housing Strategy and Plan.

4.2.4 Human Services

The Human Services Group Supervisor position will usually be filled by Oregon DHS. One or more Disaster Recovery Center (DRC) Task Forces may be formed under the Human Services Group. Disaster case management may also become a component of the work of the Human Services Group. Additional information on Disaster Recovery Centers and disaster case management may be found in Appendix 3 and Appendix 4, respectively.

Human Services includes Disaster Unemployment Assistance, which is a program managed by the Oregon Employment Department.

This group also includes disaster assistance managed by the Oregon Department of Veterans’ Affairs. This assistance is sometimes offered via one or more DRC.

Human services also include a program named Disaster Legal Services, but the State has little or no role in implementing this. It provides legal services for low-income individuals who, prior to or because of the disaster, are unable to secure legal services adequate to meet their disaster-related needs. It is implemented by means of an agreement between FEMA and the Young Lawyers Division of the American Bar Association.

² Community Organizations Active in Disaster

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Crisis counseling is listed as one component of Human Services in the National Response Framework ESF 6, but other than “psychological first aid” provided by the ARC as part of Mass Care, in this plan crisis counseling is part of ESF 8.

4.2.4.1 Other Needs Assistance

Other Needs Assistance is a component of the Individuals and Households Program which may be made available to the State as part of a Presidential major disaster declaration. ONA requires a 25% State cost-share. ONA may help pay medical, dental, and funeral costs related to the disaster. It also helps people affected by the disaster with the costs associated with the repair or replacement of certain personal property including clothing, household furnishings, appliances, and tools or computers needed for work. ONA grants may also help repair or replace cars and other vehicles necessary for transportation. The money can also be used for moving and storing personal property to avoid additional damage while disaster repairs are being made to the home. Other items for which eligible applicants may be reimbursed include generators, dehumidifiers and chain saws.

4.2.4.2 Vulnerable Populations³

- The State recognizes that there are several categories of vulnerable populations who must be housed and fed following an evacuation, defined as people who are elderly, people with disabilities and other medical or mental health conditions, people with limited English proficiency, people with hearing and sight impairments, people who are in institutions, people without access to private vehicles, as well as people in schools, day care centers, prisons and detention centers, and drug treatment centers. It also includes people who are transient such as tourists, seasonal workers, and the homeless.
- Local emergency operations plans should contain strategies and procedures for addressing the needs of vulnerable populations in the event of emergency situations.

5 Supporting Documents

- National Response Framework, ESF 6 – Mass Care, Emergency Assistance, Housing and Human Services
- ARC and FEMA National Shelter Systems (NSS)
- Multi-Agency Feeding Plan Template (draft dated January 2010)
- Feeding Task Force Guidance Document (draft dated January 2010)
- Oregon DHS Internal Operating Procedures
- Oregon Disaster Housing Strategy and Plan (under development)
- Oregon Individuals and Households Program, Other Needs Assistance Agreement with FEMA Region Ten
- Oregon Behavioral Health All Hazard Response Plan

³ FEMA sometimes uses the term Special Needs Population with a similar definition.

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- State of Oregon Animals in Disaster Plan
- Oregon Donations Management Plan (August 2001, currently being updated) – This is also Support Annex 4 to this plan.
- Local government ESF 6 Plans/Annexes

6 Appendices

- Appendix 1 Food and Feeding
- Appendix 2 Reuniting Family Members and Others
- Appendix 3 Disaster Recovery Centers (tbd)
- Appendix 4 Case Management and Benefit Claims (tbd)

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Appendix 1 – Food and Feeding

[Note: Potable water is covered in ESF 3 of this plan.]

Voluntary agencies (VOAD) can obtain food directly from State Distributing Agencies (SDA), which exist throughout the State, and typically have on-hand USDA Food and Nutrition Service (FNS) commodities. Therefore, the process of VOAD acquiring food may completely bypass the State ECC.

There are several SDA in Oregon: Oregon Housing and Community Services, Oregon Department of Education, and the Department of Human Services in its Women, Infants, and Children Program and its Children, Adults, and Families Program. SDA have a relationship with Oregon Food Bank, and the majority of local food banks in Oregon are also part of the OHCS community action network.

When it is determined that the SDA will deplete their food supplies, the USDA Food and Nutrition Service (FNS) may provide additional commodities to Oregon to support the SDA and VOAD. These requests for food should go through the State ECC ESF 6 Liaison, who will work with the Mass Care Group Supervisor, and the FNS. The Mass Care Group Supervisor may also work to “contract-out,” as needed, for additional food.

Donated food may be delivered to Oregon Food Bank staging areas by the Feeding America Network, whereupon OFB will distribute it to fixed distribution points. If normal transport is not possible, ODOT may be activated by the State ECC to transport food to both staging areas and feeding sites. If ODOT is unable to accomplish this, military resources may be activated by the State ECC for this purpose.

Organizations that provide food and feeding services generally accept food only from supply sources that they have worked with previously. In this way they know that the food is safe. This relieves county health departments from the responsibility of having to inspect all of the food coming into their community and allows them to focus inspections on food arriving from sources that are unknown. See ESF 8 and ESF 11 for more information on food safety.

Some organizations in Oregon that do feeding can call on a national network of resources to help out. For example, some organizations have high-capacity trailers that can each feed 10,000 to 25,000 persons per day from trailers. When this document was published, the Salvation Army had four of these trailers nationally. The American Red Cross had six, and the Southern Baptist Convention had ten.

The roles and responsibilities of organizations that supply food and do feeding during disaster response and the way that those organizations are activated and deployed depends on the scale of the disaster:

- For an incident with primarily a regional level impact, where food must be brought into the area, the city or county EOC or any response agency activates assistance from Oregon Food Bank by a direct request at the same time that they activate the American Red Cross to set-up a feeding site. The Oregon Food Bank distributes donated and USDA food from their warehouse and activates the Feeding America Network supply of donated

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food by making a direct request to them. If the area has been Presidentially-declared as an emergency or major disaster area, OHCS will make a request for federal food assistance to supplement and/or replace the USDA food distributed. Food is then prepared, cooked and delivered to people in need by American Red Cross volunteers at their sites. The local EOC requests deactivation of the food shipments, feeding operations and site operations as the incident merits;

- For larger events (500 meals or more per day) the State will likely request the resources of the Southern Baptist Convention, which setups kitchens with staff who prepare food for people in need at fixed feeding sites. In addition to requests to the Oregon Food Bank (and consequently the Feed America Network), they activate specific large contracts with private companies like SYSCO and Wal-Mart for the delivery of food supplies to staging areas or feeding sites. They may also receive food supplies from FEMA sources.

If early in an incident, sufficient food is not available, the feeding organizations may initially distribute Meals Ready to Eat (MREs), if available, or distribute MREs as they become available.

Additional information on the process is displayed in the “Food to Feeding” Flowchart on the next page.

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Food to Feeding Flowchart

If the Situation is...	And...	Then...	And...
Small/Local (State appropriated food)	Local EOC or agency requests	Food source site is identified (church, school, arena, etc.) cooks are called in from the community.	Feeding is done at site until the food is gone.
		Food is delivered to homes.	Food is pre-prepared or cooked by residents.
Regional	Local EOC or agency makes Food Bank request	Oregon Food Bank obtains food and water from Feed America Network or Governor's federal sources.	Food is prepared at American Red Cross or local site.
Large (500 meals or more)	American Red Cross or Salvation Army sets up mass care site	So. Baptist Conv. sets up and staffs kitchen at site; obtains food from Oregon Food Bank, SYSCO FEMA, or other big contracts.	Food is prepared at mass care sites by Salvation Army or FEMA's IA-TAC.
		Obtain water from: Wal-Mart or Feed America Network.	Used at mass care sites.

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ESF 6. Mass Care, Emergency Services, Housing & Human Services**Appendix 2 – Reuniting Family Members and Others**

Existing systems and web links:

American Red Cross

Safe and Well List

<https://disastersafe.redcross.org/>

National Center for Missing and Exploited Children

National Emergency Child Locator Center (NECLC)

www.missingkids.com

They also have a telephone "hotline," 1-800-THE-LOST (1-800-843-5678).

FEMA

National Emergency Family Registry and Locator System (NEFRLS)

<https://asd.fema.gov/inter/nefrls/home.htm>

This is activated by FEMA when requested by a state for a specific event. The federal Department of Justice (DOJ) is also involved in this.

Oregon DHS, Children and Families

CAF maintains a series of telephone reference numbers organized by county.

2-1-1, Central Oregon

<http://www.co211.info/>

2-1-1, Portland Area

<http://www.211info.org/>

2-1-1 can be activated Statewide, if needed, but someone needs to pay for the increased costs associated with the larger service area (mostly labor costs).

7

Cascadia Subduction Zone Catastrophic Annex

ESF 7 – Resource Support

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 - 6.1 Identified County C-POD Locations.....ESF 7-25

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ESF 7 Tasked Agencies	
Primary Agencies	Department of Administrative Services (DAS)
Supporting Agencies	Oregon Military Department (OMD) Oregon Emergency Management (OEM) Oregon Department of Transportation (ODOT) Oregon Department of Forestry (ODF) Oregon Department of Corrections (DOC) Oregon State Police (OSP) Oregon Health Authority (OHA)
Adjunct Agency	Civil Air Patrol (CAP)

1 Purpose

- Provide logistical and resource support to State, regional, local, and tribal entities involved in emergency response and recovery;
- Coordinate with federal government flow of supplies and support teams into impacted areas;
- Provide financial tracking and records management of the overall costs of the State response to the incident.

2 Scope

- Coordinate the provision of State resources during a disaster. This includes emergency relief supplies and equipment, telecommunications, personnel, contracting services and transportation services required for immediate disaster response activities. It also provides logistical and resource support for requirements not specifically addressed in other ESFs;
- Maintain records and systems to track the available and committed resources involved in the incident;
- Monitor the financial costs of providing resources to a disaster including costs of providing State agency support, purchasing or contracting goods and services, transportation, and above normal staffing.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Department of Administrative Services (DAS)

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 motorpool and surplus storage yard;

Assets

Inventory of DAS-owned Buildings with Generators:					
These are all automatic transfer generators. Salem Motor Pool is a manual transfer.					
State Data Center	Revenue	Justice	Portland State Office Building	DEQ/PHL	Portland Crime Lab
Human Resource Building	Commerce	Employment	Executive	Capital Mall Parking Structure	North Mall Office Building
Print Plant	Public Service Building	State Library	Albina	Eugene State Office Building	Central Point Crime Lab.

- Motorpool fleet consisting of approximately 200-275 diverse vehicles including: 4WD trucks, SUVs, and vans;
- Small cache of two way radios;
- Six satellite phones currently distributed to SDC managers;
- 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;
- Voice Mobile Office kit with a switch, handsets and phone numbers in a box available for emergency use;
- Forklift equipment at surplus warehouse;
- DAS staff includes drivers with CDLs; DAS Facilities Division has seven journeyman electricians, three HVAC control technicians, and five refrigeration mechanics on staff;
- Technicians to work on & restore mainframe data accessibility;
- Off site, out of State IT, essential information back up storage supporting Business Continuity Plan;
- Print plant has capability of designing and printing public outreach materials;
- Data center has power generators;

- Some fuel storage at State motor pool, capacity depends on if the tank has just been filled or waiting to be filled;
 - For E-10 and B20, the tanks can get as low as 2,500 gallons each and they are about 15,000 when we bring in a load to fill, sometimes a bit higher. Note: the B-20 and E-10 tanks are below ground and could be susceptible to damage in an earthquake.
 - For E-85, the tank can get as low as 1,200 gallons and a max of 11,000 gallons.
- DAS natural gas fuel system is full as long as the line remains intact, the natural gas fuel system serves as the backup station for the City of Salem bus service – “Cherriot’s”;
- Fleet has one dedicated generator at Fleet and two portable ones. One portable is natural gas powered.

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;
- Tasked with the responsibility of procuring a site suitable to the collection and distribution of donated goods and materials;
- 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;
- 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;
- 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;
- Depending on the scope of the incident, TDM (Time Division Multiplexing), phones should keep working and are supported by CenturyLink (vendor). For VoIP phones, service can be provided from two different locations other than the State Data Center. VoIP relies on the network being up.
- 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

- Essential DAS services needed post-incident include:
 - Accounting services;
 - 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 can augment ODOT vehicles for transportation needs.

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;

ESF 7. Resource Support

- 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, 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;
- No capability of transporting fuels stored at the State motor pool.

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 reestablish emergency computer communications for responders;
- Additional trained personnel specializing in motor pool operations, 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;
- 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.

3.2 Support Agencies

3.2.1 Oregon Emergency Management

See ESF-5 Emergency Management for additional OEM CSZ information.

- OEM is responsible for coordinating and managing the State's response to requests for assistance from local governments, and requests to the Federal government when State assets are not available.

3.2.2 Oregon Military Department, Oregon National Guard

In peacetime, the Guard is under the command of the Governor with its active command and administration vested in the Adjutant General. When directed by the Governor through a declaration of a "State of Emergency", the Guard may be placed in

State “active duty status”, with the State bearing financial responsibility for the committed forces to include wages, fuel, equipment maintenance, and other expenses.

The Oregon National Guard is listed as a support agency in this ESF due to the costs and disaster declaration needs to activate. It is anticipated that upon activation, the Guard will take on a logistical coordination and distribution role in ESF 7 operations to manage this significant event.

Priorities

- Immediate assessment of surviving equipment, facilities and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Recall of personnel;
- Identify fuel sources;
- Re-establish Statewide air traffic control;
- Respond to mission tasking by OEM;
- The Oregon National Guard may engage in immediate response lifesaving response actions for up to 72 hours at individual unit commander’s decision;
- 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

- Logistics operations handled at JFHQ (joint force headquarters) in Salem;
- Contracting department at OMD;
- State Logistics section and movement control teams;
- Logistics planning section;
- Use of RFID tags, response force software and movement control team tracking of logistical missions;
- UH-60 Blackhawk helicopters based in Salem;
 - Medical evacuation capability.
- CH-47 heavy lift helicopters based in Pendleton;
- C-23 Sherpa fixed wing transport;
- 141 BSB (Brigade Support Battalion) w/ five or six forward support companies throughout the State, two located east of the Cascade Range;
 - Based on scenario it is likely that forward support companies in Bend, Springfield and Pendleton likely be able to respond.
 - Transportation assets include HMMWV (“Humvee”), LMTV Light Utility trucks, HMTV 2.5 ton and 5 ton heavy utility trucks.
- Additional transportation assets in storage are located at Biak Training Center in Redmond;

- Security Forces:
 - Quick Response Force (QRF) (2/3 based in Portland Metro area, 1/3 in Klamath Falls).
 - Rapid Response Force (RRF) (Eugene/Springfield area), utilized for convoy security. Designed response time is 36 hours.
- Heavy road clearance/ construction equipment is available-located in Dallas, Albany, Astoria, Biak;
- Significant maintenance facilities located in Salem, Lebanon, Springfield, Camp Withycombe, Biak;
- Air traffic control assistance/remote airfield management is available, stationed at Portland and Klamath Falls;
- The former USAF radar installation at Christmas Valley is a guard-owned facility that can serve as a logistical staging ground or for other relief purposes;
- The former Umatilla Army Depot is a partially guard-owned facility that can serve as a logistical staging ground or for other relief purposes;
- US Army Reserve Units in State now available to support Oregon National Guard.

Capabilities

- Manages State efforts to procure or contract for equipment, supplies, services, etc. to meet the needs of the incident in consultation and cooperation with DAS;
- OMD maintains a current list of contractors that have been vetted by the State to be able to supply goods and services in a disaster;
- Transport of relief supplies and logistical supplies from and between federal and State staging areas to local points of distribution;
- Security of ESF-7 missions;
- Set up, secure and operate community points of distribution as tasked;
- Communication and cooperation with Federal National Guard Bureau and DoD.

Catastrophic Event Operational Challenges

- Potential for shortages of contracted ESF-7 needs (refrigeration trailers, etc.);
- Damaged communications and power infrastructure would reduce the timeliness and effectiveness of ESF-7 operations into affected areas;
- 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.
- Accessibility to fuel resources;
- Roadway access issues due to earthquake damages and civilian traffic;
- Inability of OMD trucks to use civilian trailer truck hitches;

- Limited petroleum storage.

Support Needed Immediately After a Catastrophic Event:

- Request of National Guard Bureau JET (Joint Enabling Team) team for:
 - Establishment of a link between the NGB and the State.
 - Assist with the collection, reporting and sharing of information.
 - Coordinate with Federal, State, local and other NG resources to facilitate required support (EMAC, etc.)
 - Diesel and gasoline fuels, to include transit and storage of fuels;
 - Personnel to support ESF-7 operations;
 - Additional vehicles and operators;
 - Heavy lift rotary aircraft;
 - Fixed wing aircraft.

3.2.3 Oregon Department of Transportation

See ESF-1 for complete ODOT CSZ information

Priorities

- As ESF-1 priorities are met, support State ESF-7 needs as directed by primary agency;
- Assist with staging and transport of emergency relief supplies and equipment.

Assets

- See ESF 1 Transportation for more information on ODOT assets and resources;
- Equipment and personnel not needed for ESF-1 mission tasks can be relegated to providing ESF-7 resource support.

Capabilities

- Coordinate all transportation-related missions in support of the State Emergency Operations Plan;
- 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;
- Provide ODOT resources to support emergency relief supplies and equipment, telecommunications, personnel, contracting services, and transportation services required for immediate disaster response activities;
- Has role in transportation of Strategic National Stockpile;
- Work with JIC and County Operations Centers to establish public messaging priorities and locations for ESF-7 Resource support;
- Provide evacuation and security assistance through use of barricades and signage;

ESF 7. Resource Support

- ODOT has minor trucking capabilities including small box trucks and a 40' soft side truck that can be used to transport supplies if not needed for transportation mission tasks;
- Can provide resource support through its procurement process for transportation issues;
- Can provide assistance in setting up State staging areas at the State Fairgrounds and numerous rest areas along the I-5 corridor. Limited extraneous man power for loading or unloading.

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;
- 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.

Support Needed Immediately After a Catastrophic Event

- Immediate request for personnel and equipment through EMAC will be first needed. 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

- Likely be asking for assistance from USN, Coast Guard and other military support to assist with getting equipment and personnel via air or sea into the coastal areas due to expected road damage and coastal inaccessibility from inland;
- Fuel;
- No capability within ODOT of transporting fuel;
- PPE for responding personnel.

3.2.4 Oregon Department of Forestry

See ESF-4 for complete ODF CSZ information

Priorities

- Ensure safety of personnel and facilities;
- Assessment of State forestry issues as a result of the incident;

- Coordinate with primary agency for ESF-7 needs of forestry assets and procurement abilities following incident.

Assets

- See ESF-4 Firefighting for more information on ODF assets and resources;
- Equipment and personnel not needed for ESF-4 mission tasks can be relegated to providing ESF-7 resource support.

Capabilities

- Can provide equipment and personnel to assist with roadway debris removal;
- One of ODFs primary tasks will be in opening up forest road systems;
- Can provide a network of alternate road systems via forest roadways;
- Private sector contracts and relationships with private forest land owners enables access to private logging roads and coordinating the acquisition of private logging equipment, for road clearance;
- ODF has private sector contracts for aircraft (from out of State);

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 road building and aerial missions if normal communication systems are down.

Support Needed Immediately After A Catastrophic Event

- Accessibility to fuel resources;
- Additional trained personnel to assist with ODF resource support 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 Oregon Department of Corrections

Priorities

- First priority for all Oregon DOC facilities is to make themselves and their facilities whole and functional first. No assistance will be available to the response effort until this is complete (keep public safe by ensuring inmates stay inside);
 - Facilities are contained and able to get up to operational status without outside assistance
 - May take one day to one week (or longer?) to get "whole" before they can help State and accept mission assignments

- Must clear facility access paths and roads on site before they can even get to ingress/egress roads.

Capabilities

- Provide Central Distribution Center (CDC) as possible repository for national stockpile operations;
- Assist with staging and transport of emergency relief supplies and equipment;
- Every facility in Oregon has a “cover-down” plan to move inmates to other facilities;
 - Each facility can receive another prison’s inmates in their entirety
 - Plans are comprehensive and practiced/trained regularly (inmate moves occur regularly for other reasons as well)
- Clean-up crews (debris removal);
- DOC can supply trained inmate flaggers;
- Can provide temporary housing (fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing
- Provide equipment and operators;
 - Evacuations (moving people)
 - Trucks, bulldozers, other heavy equipment
- Can possibly augment response with DOC fuel supplies.

Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations;
 - Semi-trucks (sleepers)
 - Also have refrigeration & dry good trucks
 - Vehicles have manual fuel pumps on board
 - Some earthmoving equipment (bulldozers, dump trucks)
 - Staff at every facility have CDLs
 - Trained forklift operators (staff and inmates)
- Approximately 143,000 gallons of diesel stored at central processing location;
- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Limited skill levels on inmate crews;
 - Down tree cleanup & debris cleanup
 - Chainsaw brigade
 - Flaggers

- Maintenance
- Mechanics
- Plumbing, carpentry and electricity (inmates);
 - Though felons cannot hold professional licenses, they can perform these duties with supervision
 - Assist journeyman and licensed professionals – inmates trained to this level
- ODF wildfire assistance camp;
 - Crews no longer in use since 2011
 - Equipment and “mobile camp” still exists and could be utilized
- Two structural engineers on contract (one in south part of Oregon, one in northern);
- Staging Areas could be located outside on DOC properties;
- Mobile Kitchen (food prep for crews/personnel/housing);
 - USAR team support (at base camps)
 - Fire team support (at base camps)
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death
 - Peer counseling
 - Family death
 - CSIM counselors (ESS group) have lawyer/client privileges
 - Could be used in State ECC and other facilities for responder staff members
- Gang Task Force (could be tasked by State and used for security);
 - Not as prepared for riot-type situations as cops are
 - Can be deputized to function as law enforcement
 - Provide security for firefighters and EMS
- ODC is self-sustaining for approx. 14 days (similar for all facilities);
 - Stores of salt, gravel, etc., to maintain their properties kept on site at prisons (but ingress/egress away from DOC facilities would need ESF #1 assistance)
 - Prisons keep food supplies for four days
- DOC personnel are trained to be deployed to other DOC facilities;
- Has retiree cadre that could be called upon to assist with DOC operations;
- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities
- DOC Facilities have generators and back-up fuel;

- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond
 - Very comprehensive plans for all scenarios
 - Plans exercised (and plans activated for many other scenarios routinely)

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;
- DOC can go two-three days (realistically, at best) without staff relief for their own facilities;
 - Possibility some of DOC staff will walk off job in this event to care for families
 - DOC will be short staffed immediately after any event like this and may initially need assistance with their own tasks.
- Ingress/egress to facilities West of Cascades.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities and move supplies and equipment from DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

3.2.6 Oregon State Police

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;
- 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

- Key personnel with assigned home-based patrol vehicles;
- Employees are encouraged to have emergency plans for their homes and families as well as food for at least seven days;
- 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;
- Have mutual aid agreements with Washington, Idaho, California, and Nevada where we can ask for emergency mutual aid within 50 air miles. This is a verbal emergency request;
- Have cooperative policing agreements / MOU's, in State with almost all 36 counties. These are written agreements that haven't been renewed or OSP now performs these functions on a verbal agreement.

Capabilities

- Develop and maintain a liaison between local, State and federal law enforcement agencies in Oregon;
- Because OSP is often first on-scene during an emergency, it may act as an initial incident command agency until the local incident command agency is on-scene, or if no local agency is available;
- OSP personnel at a disaster scene may provide limited damage assessment as their duties permit;
- In addition to enforcement and specific services, OSP provides for the protection of life and property, traffic control, crowd control, communications, emergency first aid, site security, and security for vital State facilities and critical infrastructure;
- Generally, law enforcement within the disaster/emergency area remains the responsibility of local authorities along established jurisdictional boundaries, unless State assistance is requested or required by statute;
- Assist with evacuations;
- Provide peace keeping missions on the roadways;
- Work closely with ODOT to provide viable routes into and out of the coastal high impact areas;
- COOP plan to provide for Troopers to self-dispatch to local community EOC's when all communications are lost;
- Support security of logistics efforts;
- Escort transit of and provide security of Strategic National Stockpile;
- Work with ODOT to open roadways and establish routes to use to facilitate logistical support to the coastal areas, and evacuation routes;
- Some OSP Troopers are HAM radio operators, however OSP doesn't coordinate the resource and do not use it in a functional capacity.

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;
- Accessibility to fuel resources, current fuel resources may last for approximately four days;
- Coastal offices are unlikely to be functional; several coastal offices are located on docks which will be severely impacted by this event;
- Roadway damage will limit movement and impact a unified response;
- Radio and repeater sites are supplied with generator back-up power and will run out of fuel within three-four days without being recharged with fuel;
- Employees with cars and capabilities throughout State may be isolated and unable to respond due to road / bridge damages.
- OSP vehicles are commercial fuel dependent – and dependent on electricity to access those fuel resources;
- OSP has limited resources and personnel in the State; may be challenging to meet demand for response services.

Support Needed Immediately Following a Catastrophic Event

- Fuel for continued OSP operations and maintaining facilities functioning under generator power;
- Support for fueling vehicles without electricity;
- Communications issues will need to be resolved;
- OSP doesn't have supply of food or water for personnel once personal supplies are expended.
- 3.2.7 Oregon Health Authority
- Deploy and coordinate the movement and delivery of Strategic National Stockpile (SNS) Program (to provide assets to States and counties within 12 hours of the decision to deploy the SNS asset;
- Provides Broad spectrum support (12-hour Push Pack) and specific item support (i.e., managed inventory, vaccine, Federal Medical Stations).

Priorities

- Account for staff;
- Determine who can make it to work (if work location viable);
- Follow established procedures for staff safety and security;
- Available staff to report within 24 hours;
- Establish communications at surviving facilities;
- Establish situational awareness for ESF-8 issues;
- Determine how to coordinate with ECC being over 50 miles away (likely unable to send liaison, at least initially. Public Health provides common operating picture to ECC for ESF-8 issues and across all the ESFs where public health has a role);

- Determine availability of resources for Medical Reserve Corps (MRC), OR D-MAT, hospitals, power/water, etc;
- Reestablish critical agency to better position PHEP to take mission assignments;
- Initiate immediate contact with HHS, FEMA Region X and CDC Operations Center to relay mission critical information to federal agencies.

Assets

- The primary facility for the Oregon Health Authority is in Portland (800 NE Oregon Street). Other Public Health facilities are located here:
 - Two staff members in Pendleton;
 - Two staff members in Bend;
 - One staff member in Astoria;
 - Two staff members in Eugene;
 - One staff member in Grants Pass;
 - One staff member in Roseburg;
 - One staff member in Salem;
 - *No Public Health staff locations in tsunami zones.
- Alternate facility site number one is the State Lab in Hillsboro.
- Other alternate site is ODOT facility in Clackamas. If infrastructure is possible, available staff to report within 24 hours.
- Public Health can function virtually if necessary (HOSCAP, HAN, OpsCenter, Web EOC, etc.) if those systems are up and running to gain some situational awareness and start operating at some level.
- Public Health staff east of the Cascades could take certain actions on command and control decisions – Strategic National Stockpile (SNS) and other issues (anticipated timeline is 24 hours for Eastern staff to be up and functioning);
- Staff located outside of Portland are equipped with satellite phones and Blackberries, laptops with wireless cards, etc.;
- Portable hard drives and access to GIS information, if systems are up and running;
- Public Health vehicles are equipped with 72-hour kits so staff driving them would be self-sufficient for a period of time without resources;
- Health Preparedness staff have preparedness type tools (all staff – 72 hour kits) because they are core to incident management team for ESF-8;
- HF and UHF radio capability;
- HAM radio communications;
- 160 satellite phones agency-wide, also distributed to Oregon Tribes;
 - County Health Departments have at least two, and all Oregon hospitals have at least one.

- Small caches of MCI supply trailers (approx. 10) that are pre-deployed around the State – but those would provide limited resources for this type of scenario. Would likely not have what was needed, and would run out immediately;
- Storage for temperature controlled vaccines at public health facility in Portland.

Capabilities

Public Health has responsibilities to support these **public health** response missions (Aligns with ESF-10 Essential Functions of Public Health):

- Monitor health;
- Diagnose and investigate;
- Inform, educate and empower;
- Mobilize community partnership;
- Develop policies;
- Enforce laws;
- Link to/provide care;
- Assure competent workforce;
- Evaluate; and
- Research.
- PHEP, with the aid of the Conference of the Local Health Officials (CLHO), develops plans and procedures to prepare and respond to emergencies concerning the public's health;
- Coordinate logistical ESF 8 support by obtaining medical supplies; organize teams and personnel, etc. Support medical missions logistically for private and public sector. Maintain list of private sector medical suppliers;
- Track agency finances through inventory management system with virtual warehouse (IRMS).
- Receipt and distribution of the Strategic National Stockpile, coordination with ODOT for SNS movement;
- Strategic National Stockpile coordination and administration;
- Set up and management of the AOC;
- Coordinate requests for and deployment of public health resources;
- Assist in coordinating patient movement;
- Maintains and manages regional medical supply caches;
- Emergency Medical Services (EMS): Maintain situational awareness of EMS assets and needs. Facilitate redeployment of these assets on a mission essential basis;
- Oversees relocation of medical supply assets. The State has the ability to relocate Hospital Preparedness Program funded assets (e.g., generators, trailers, PPE, etc.);

Maintain the following web-based systems:

Hospital Capacity Web Site (HOSCAP): this system is used in hospital emergency departments and participating EMS agencies to provide situational awareness in mass casualty incidents and other events. Provides Emergency Department (ED), trauma and inpatient bed availability and additional hospital capacity and logistics information.

- Health Alert Network (HAN) is part of the CDC National Health Alert Network System and is a key component of the Public Health Information Network (PHIN). HAN is used to convey consistent and timely health information to partners around the State. HAN has a document library available for routine, non-emergent collaboration within the public health system with local health departments, tribal, and hospital partners.
- SERV-OR: Volunteer registry for licensed health professionals.

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.
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Logistics (SNS) movement and distribution is heavily reliant on transportation. MOU with ODOT for that, but may need to partner with State ECC to get a work-around if ODOT couldn't move it. Not sure how that would occur absent viable road infrastructure;
- Public Health has no transportation capabilities for this type of logistical movement and supply (agency only has a few motor pool cars, for the most part). Nothing that could be used as backup transport for SNS;
- Security of SNS;
- Would be working with Federal counterparts to bring in Federal medical stations and other supplies (NDMS – National Disaster Medical System)- Example: 250-bed units of care to take loads off hospitals;
- None of private sector health care has long-term capabilities if their normal day-to-day logistics is cut off. No back up warehouses or caches of supplies that would even come near what would be needed post-quake. System would run out of supplies, medications, hospital beds, providers – all across the board – immediately;
- No capacity in Oregon for comprehensive storage in medical supplies. The public health/medical system here in Oregon is "tremendously non-resilient" for this type of scenario;
- After initial trauma issues are cared for, subsequent medical surge will be chronic care (examples-blood pressure, diabetes, dialysis, etc.). Limited hospital resources to offer care typically received. It is extremely likely resources will be needed to move people out of State for care;
- Some hospitals have warehouse storage for supplies, but they only have 24-72 hours of supplies under a "normal use" situation;

- Challenge of prioritizing who is the priority for limited medical resources;
- Public Health will work on rule modifications for patient transport with Emergency Medical Services (EMS) Ambulance Service Area (ASA) contract: Public Health would work on rule modifications for patient transport following scenario;

3.3 Adjunct Agency

3.3.1 Civil Air Patrol

The Civil Air Patrol is the official civilian auxiliary of the U.S. Air Force. They can provide aerial reconnaissance and airborne communications relay support for critical communications.

Priorities

- CAP requires an Operational Risk Assessment (ORM), completed by the CAP 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, 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, and Tillamook;
- CAP currently has approximately 250 members distributed across the State, of those 250, 40 are pilots;
- Their aircraft include seven Cessna 182 and one Cessna 172 aircraft.

Capabilities

- Can provide quick assessments of airport and runway status for their own operations;
- Once operational, CAP aircraft can:
 - Provide aerial reconnaissance of damaged infrastructure (roads, ports, rail);
 - Can directly support agencies by providing such services as airborne search, airborne disaster assessment, airborne and ground Electronic Locator Transmitter (ELT) tracking, transportation of officials, and assistance in a variety of ground operations. It also has an extensive communications network.

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.

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;
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for ESF 7 missions.

4 ESF-1 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Resource Management assets have been identified to meet the request, OEM will create an action using OpsCenter to the specific State agencies to accomplish the task.

DAS will provide a representative to the State ECC who will be the primary point of contact for all resource needs. When activated, the Oregon National Guard will provide a representative to the State ECC for resource support, and OEM will coordinate activities with the Joint Operations Center.

4.1 Objective:

- Provide or coordinate the provision of services, equipment, and supplies to support expedient operations associated with a catastrophic earthquake and resultant tsunami;
- ESF-7 shall plan, coordinate and managing resource support and delivery in response to and recovery from a catastrophic earthquake and resultant tsunami;
- ESF -7 shall provide and furnish requested supplies and equipment from State agency resources, commercial sources and donated goods to Oregon counties impacted by a catastrophic earthquake and resultant tsunami;
- Provide support for the approval and acquisition of equipment and supplies not available through normal purchasing channels and ordering time frames following an earthquake.

4.2 Challenges:

- The movement and delivery of resources and capabilities to meet the needs of disaster survivors will be extremely limited for an unknown period of time;
- Limited numbers of aerial support to transport commodities to affected and roadway inaccessible populations;

- Availability of accessible locations for commodities distribution for the affected population;
- Need to get traditional private sector resource distribution re-established in a timely manner;
- Limited Law Enforcement resources to provide on-site security to all required areas after event;
- Lack of communications making it hard to request and validate resource needs of impacted communities;
- Number of significantly damaged and blocked roads, railways, air and sea ports will overwhelm the limited number of engineers, inspectors and crews to conduct assessments and inspections to move resources to damaged communities via traditional methods.

4.3 Assumptions

- In this scenario, nearly every routine resource channel, supply capability, and transportation system will be severely, if not totally, strained. Accordingly, providing resource support to the impacted area will be extremely challenging;
- The primary source of equipment, supplies, and personnel will be from State-owned and local resources. However, these resources will be severely strained in an earthquake situation. Accordingly, obtaining resources from outside sources such as FEMA, EMAC, and commercial organizations will be necessary;
- Damage from the initial earthquake and tsunami will destroy most of HWY 101 and east-west access roads that provide access to the coast;
- Access and supporting infrastructure to/from airports will be a limiting factor for aerial delivery of resources;
- Aftershocks will cause a significant amount of additional damage during the response;
- Tsunami threat from aftershocks and floating debris will limit access to coastal communities;
- Fuel requirements for assessment and repair crews will exceed local capability;
- Local, State and Federal capabilities and resources will be overwhelmed by the magnitude of the incident;
- Response resources in the impacted area will have limited capability to function and some impacted areas will be isolated;
- Resources outside of the impacted will have extended response times due to significant impact to transportation infrastructure;
- Severe winter weather including rain, snow, fog will hamper response operations;
- Instant loss of land line/network communications/power will limit ability Statewide of providing local situational awareness.

4.4 ESF-7 Shortfalls and Requirements:

SHORTFALLS	REQUIREMENTS
Logistical support will be inadequate for need.	- Activation of EMAC and federal assistance for resource assistance - Coordination with private sector
Coordination and prioritization of needed resources with federal ISBs and State staging areas	- State presence on resource coordination groups to effectively prioritize needs - Coordination with resource availability in neighboring States to support needs in Oregon - Tracking and effective distribution of goods to community points of distribution (C-PODs)
Limited access to the impacted area	- Rotary wing support to transport support teams and resources - Ocean based support to transport personnel, injured and resources - Debris clearance to provide access to impacted area - Waivers for driver restrictions and oversize vehicles on public roads
Support for Isolated Communities	- Coordination with local officials on locations and needs of survivors - Possible evacuation of survivors to areas where required support is available

4.4 Concept of Operations

Resource support is triggered when other ESF, State, Tribal and local governments have exhausted their supplies and capacity for the provision of services, personnel and commodities during the response and recovery phases of an emergency or disaster. This may include emergency relief supplies, office equipment, office supplies, facilities, transportation services, and personnel required to support emergency activities.

This ESF will likely be implemented as soon as possible by the State ECC following a catastrophic earthquake and resulting tsunami. Implementation of this ESF will activate its support agencies as needed to support all other active ESF's.

Typically actions undertaken by this ESF will be coordinated with local jurisdiction emergency managers, State agencies, and other ESF leads who will expend all available resources prior to seeking assistance through the State ECC. Due to the catastrophic nature and scale of this event, it is assumed that all county resources will either be compromised or put into service immediately, therefore implementing this ESF immediately following the event.

- ESF-7 primary and supporting agencies will provide support to county and municipal agencies as needs are identified;

ESF 7. Resource Support

- Procurement will be made in accordance with current local, State and federal laws and regulations that include emergency procedures; ESF-7 will coordinate with ESF-1 to develop strategies to transport goods and personnel to the operational area transportation entry points and onward to county established receiving points;
- ESF-7 will prepare emergency resource contracts to support the emergency management response efforts.

ESF-7 functions include but are not limited to:

- Develop methods and procedures for responding to and complying with requests for resources in an environment where normal communication procedures are strained;
- Develop procedures for reimbursing private vendors for goods and services rendered;
- Develop lists of private vendors and suppliers and their available resources;
- Establish pre-planned contracts where necessary to ensure prompt support from vendors during emergencies.
The following information from State agencies, boards and commissions, American Red Cross, volunteer organizations and the private sector where applicable will be needed post-event:
- Identification of resources that can be provided to local jurisdictions and State agencies during response and recovery phases of an emergency or disaster event;
- Pre-event, determine for internal and external resources identifying, at minimum, the following:
 - Essential personnel and staffing for internal and external support requirements.
 - Emergency supplies needed for personnel.
 - Essential records, equipment, and office supply needs.
 - Essential office space requirements.
 - Potential liability issues and appropriate insurance levels to State agencies.
 - Additional transportation requirements in support of an emergency or disaster.
 - Prioritized internal activities that may require ESF 7 assistance in an emergency or disaster.
- Alert those agencies whose personnel, equipment, or other resources may be used;
- Locating and coordinating the use of available space for incident management activities;
- Coordinating and determining the availability and provision of supplies stocked in distribution facilities and customer supply centers when available;
- Procuring required stocks from vendors or suppliers when State resource items are not available;
- Establish a resource tracking and accounting system;

- Assess initial reports to identify potential resource needs;
- Identify procurement resources and potential facility locations in the disaster area of operations;
- Manage State Staging Areas as activated by the State Emergency Coordination Center;
- Coordinate with ESF-13 (Law Enforcement) to evaluate staging area, community points of distribution or warehouse security requirements;
- Provide data to the Public Information Officer for dissemination to the public;
- Locate, procure and coordinate locations of prospective staging area warehouses available for lease to replace damaged or destroyed facilities in impacted communities.

5 Supporting Documents

- National Response Framework, ESF 7 – Logistics Management and Resource Support
- County ESF 7 Annexes
- Oregon Mass Commodities Support Annex to the State EOP

6 Appendices

6.1 Identified County C-POD Locations

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Cascadia Subduction Zone Catastrophic Annex

ESF 8 – Public Health and Medical Services

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ESF 8. Public Health and Medical Services

ESF 8 Tasked Agencies	
Primary Agency	Oregon Health Authority (OHA), Public Health Division (PHD)
Supporting Agencies	Department of Administrative Services (DAS) Oregon Department of Agriculture (ODA) Occupational Safety and Health Division (OSHD) Oregon Department of Fish and Wildlife (ODFW) Oregon Military Department (OMD)
Adjunct Agency	American Red Cross (ARC)

1 Purpose

ESF 8 coordinates State assistance to provide public health and medical care needs (to include veterinary and/or animal health issues when appropriate) during a catastrophic disaster or incident and/or a developing potential health and medical situation.

2 Scope

ESF 8 provides assistance to local and tribal governments in identifying and meeting the public health and medical needs of victims of a major disaster.

- Assess public health needs; public health surveillance; medical care personnel; medical equipment and supplies; patient evacuation; hospital care; safety and security of human drugs, biologics, medical devices, and veterinary drugs; food safety and security; agricultural safety and security; radiological/biological hazards; public health information; and potable water.
- Coordinate mental and behavioral health care through the Mental Health Division; and, victim identification/mortuary services through the Medical Examiner Division.
- Health/Medical Equipment and Supplies includes receipt and distribution of the Strategic National Stockpile.

3 Roles and Responsibilities

3.1 Primary Agency

3.1.1 Oregon Health Authority – Public Health Division

Priorities

- Account for staff;
- Assess condition and safety of OHA-OPHD facilities and determine who can make it to work;
- Follow established procedures for staff safety and security;
- Available staff to report within 24 hours;
- Establish communications at surviving facilities;
- Establish situational awareness for ESF-8 issues;

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- Determine how to coordinate with ECC being over 50 miles away (likely unable to send liaison, at least initially. Public Health provides common operating picture to ECC for ESF-8 issues and across all the ESFs where Public Health has a role);
- Determine availability of resources for:
 - Medical Reserve Corps (MRC)
 - State Managed Volunteer Pool (SMVP)
 - Oregon Disaster Medical Team (ODMT)
 - Hospital facility structural and non-structural status, utilities, patient/staff status and bed availability
 - EMS status
 - Local Health Departments
- Initiate immediate contact with HHS, FEMA Region X and CDC Operations Center to relay mission critical information to federal agencies.

Assets

- The primary office and agency operations center for the Oregon Public Health Division is located at 800 NE Oregon Street, Portland, OR 97232. Other Public Health facilities are located at:
 - Pendleton (two staff members);
 - Bend (two staff members);
 - Astoria (one staff member);
 - Eugene (two staff members);
 - Grants Pass (one staff member);
 - Roseburg (one staff member);
 - Salem (one staff member);

*No Public Health staff locations in tsunami zones.
- Alternate “West of the Willamette River” OPHD Agency Operations Center is at the Oregon State Public Health Laboratory at 3150 NW 229th, Hillsboro. The alternate “East of the Willamette River” OPHD Agency Operations Center site is ODOT office at 9200 SE Lawnfield Road in Clackamas. If infrastructure is passable, available staff to report within 24 hours as directed;
- Public Health can function virtually via the use of computer systems- (HOSCAP, HAN, OpsCenter, Web EOC, Inventory Request Management System (IRMS)) if those systems are up and running to gain some situational awareness and start operating at some level;
- Public Health staff east of the Cascades could take certain actions on command and control decisions – Strategic National Stockpile (SNS) and other issues (anticipated timeline is 24 hours for Eastern staff to be up and functioning);
- Staff located outside of Portland are equipped with satellite phones and Blackberries, laptops with wireless cards, plans stored on flash drives, etc.;

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- Portable hard drives and access to GIS information, if systems are up and running;
- Public Health vehicles are equipped with 72-hour kits so staff driving them would be self-sufficient for a period of time without resources;
- Health Preparedness staff have preparedness type tools (all staff – 72 hour kits) because they are core to incident management team for ESF-8;
- HF and UHF radio capability;
- 180 satellite phones distributed by OPHD-HSPRP to Oregon partners and internal staff as follows:
- Tribes: One (1) each distributed to each of 8 tribes (Total: 8)
- Local Health Departments: Two (2) each to each of 33 LHDs; Three (3) each to one (1) LHD. (Total: 69)
- Hospitals: One (1) each to each of 63 hospitals (Total: 63)
- OHA and OPHD: One (1) each to each of 40 positions (Total: 40)
- Small caches of MCI supplies in 10 trailers that are pre-deployed around the State – but those would provide limited resources for this type of scenario. Would likely not have what was needed, and would run out rapidly;
- Oregon Disaster Medical Team (ODMT): A volunteer group of 135 licensed health care providers and paraprofessional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide emergency medical care during a disaster or other event occurring in Oregon. OPHD and ODMT have signed a Memorandum of Understanding that allows this 501(c)(3) not-for profit to plan, train and provide relief healthcare services when local, county and mutual aid reserves are inadequate due to a mass casualty incident, disaster, or public health emergency;
- Medical Reserve Corps (MRC) units are deployed locally and by Public Health. They can be part of State level response (MRCs have to preregister to help out State). MRC personnel register in SERV-OR;
- If a county calls up MRC, liability belongs to county MRCs are serving. State Public Health assumes liability if they mission task MRCs on State level;
- Storage for temperature controlled vaccines at public health facility in Portland.

Capabilities

The OHA programs involved in emergency preparedness and response are:

Health Security Preparedness & Response Program (HSPRP) improves public health preparedness capacity by ensuring coordination among tribes, local, regional, State and Federal agencies and private health care partners before, during and after emergency events where the public's health is an issue.

The Health Security & Response Program Planning and Evaluation section manages the training of public health, hospital, and other relevant partners in various aspects of preventing and responding to public health emergencies. It also manages the emergency exercise program for public health response.

Epidemiology and Surveillance Program is responsible for the identification, investigation, and prevention of diseases caused by infectious agents. This program

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conducts disease surveillance; collects and analyzes surveillance data; publishes public health recommendations; develops disease prevention, preparedness and response guidelines; and investigates and helps control disease outbreaks.

Acute and Communicable Disease Prevention Program provides epidemiologic and clinical expertise and guidance to the Incident Commander and develops guidance on disease related risks.

Public Health Laboratory serves as a level 3 bio-safety facility for biological, clinical and unknown environmental sample testing (human chemical testing is provided by state public health labs in Alaska, Washington and Idaho).

- Provides biological confirmatory testing, and chemical specimen collection and specimen referral guidance to Oregon Sentinel Laboratory Response Network (LRN) laboratories;
- Works cooperatively with CDC;
- Manages the Oregon Laboratory Response Network that supports environmental and human testing of unknown biological and chemical threat agents;
- Provides confirmatory laboratory testing on human clinical specimens; and
- On implementation, OSPHL's Laboratory Information Management System (LIMS) allows:
 - Client health departments, laboratories and providers to submit laboratory requests directly;
 - Communications with clients through a dedicated messaging system;
 - Health officials to streamline the access and correlation of laboratory data throughout the State for outbreak investigation; and
 - Phase 2 (spring of 2012) will allow laboratory results to be directly input into Electronic Medical Record (EMR) systems.

Emergency Medical Services (EMS) Section develops situational awareness of EMS resources; communicates with EMS providers; and coordinates realignment of EMS resources during a surge event. They coordinate Statewide trauma system planning, ambulance service area planning, and develops standards for ambulance personnel and emergency medical technicians.

Office of Environmental Public Health (OEPH) assures Statewide control of environmental hazards through drinking water protection, radiation protection, environmental toxicology and epidemiology programs and regulation of food, pool and lodging facilities.

- **Drinking Water Program** administers and enforces drinking water quality standards for public water systems. It provides guidance on prevention of and response to water system contamination.
- **Radiation Protective Service** provides radiation monitoring expertise and is the State's primary radiological response organization. It also provides radiation monitoring training to local government emergency response agencies.

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- **Environmental Toxicology Section** protects the health and safety of the public from environmental hazards.

Public Health has responsibilities to support these **public health** response missions (Aligns with the 10 Essential Functions of Public Health):

- Monitor health;
- Diagnose and investigate;
- Inform, educate and empower;
- Mobilize community partnership;
- Develop policies;
- Enforce laws;
- Link to/provide care;
- Assure competent workforce;
- Evaluate; and
- Research.
- HSPRP , with the aid of the Local Health Departments, hospitals and health care systems, develops plans and procedures to prepare and respond to emergencies concerning the public's health;
- Coordinate logistical ESF 8 support by obtaining medical supplies; organize teams and personnel, etc. Support medical missions logistically for private and public sector. Maintain list of private sector medical suppliers;
- Receipt and distribution of the Strategic National Stockpile, coordination with ODOT for SNS movement;
- Strategic National Stockpile coordination and administration;
- Set up and management of the AOC;
- Provide trained personnel, and provide "just-in-time" training, as needed;
- Develop and coordinate external and internal communications in partnership with OHA communications, to include public messaging on incident status and mitigation measures;
- Coordinate requests for and deployment of public health resources;
- Provide one or more liaisons to the State ECC;
- Provide technical assistance (guidance) on and establish mechanisms for tracking of financially-related information to support reimbursement requests from FEMA;
- Assist in coordinating patient movement;
- Support agency in providing environmental health analysis side for clean water, food safety, and chemical spills;
- Ensure potability of water supplies;
- Manage continuity of public health operations;
- Public Health Authorities can be put into place to close facilities and quarantine people;

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- Develop and implement demobilization plans;
- Develop incident after action reports (AARs);
- Provide Healthcare System Liaison communications:
 - To and from Regional Coordinators for clarification of issues/status of hospitals, EMS and other components of the regional healthcare system;
 - Obtain regional SITREPs to include specific information (e.g., employee absentee rates in hospitals);
- Mission assignments are made or requested of the following:
 - Oregon Disaster Medical Team (ODMT);
 - National Disaster Medical Team (NDMS);
 - Federal Medical Station (FMS) – The AOC healthcare branch is involved in siting/staffing decisions;
 - Medical Reserve Corps (MRC) and SMVP deployment of volunteers;
- Maintain and manage regional medical supply caches including -DECON; MCI; Incident command trailers; and satellite trailers;
- Oversees relocation of medical supply assets. The State has the ability to relocate Hospital Preparedness Program funded assets (e.g., generators, trailers, PPE, etc.);
- Coordinate staffing of alternate care sites through SERV-OR and/or MRC, as requested;
- Assist in emergency credentialing SERV-OR and MRC volunteers;
- Assist the Office of Health Care Regulation & Quality Improvement in developing requests for Centers for Medicare & Medicaid Services (CMS) related bed identification to allow use of beds for purposes other than originally designated (Form 1135 Waiver);
- Emergency Medical Services (EMS): Maintain situational awareness of EMS assets and needs. Facilitate redeployment of these assets on a mission essential basis;
- Provide public messaging, outreach and guidance for public health issues;
- Facilitate development of crisis standards of care;
- Provide subject matter experts to advise local communities on health issues;
 - Epidemiologists
 - Physicians
 - Mass fatality technical specialists
 - Drinking Water
 - Radiation Protection Services
 - Toxicology
 - Mass Care responsibilities for congregate care facilities

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Post Event Activities:

- Conduct post-event surveillance of medical care systems;
- Collection of data on medical conditions;
- Post-event exposure registry rostering for hazardous material exposure;
- Testing for safety of drinking water and food.

Maintain the following web-based systems:

- Hospital Capacity Web Site (HOSCAP): This system is used in hospital emergency departments and participating EMS agencies to provide situational awareness in mass casualty incidents and other events. Provides Emergency Department (ED), trauma and inpatient bed availability and additional hospital capacity and logistics information;
- Health Alert Network (HAN) is part of the CDC National Health Alert Network System and is a key component of the Public Health Information Network (PHIN). HAN is used to convey consistent and timely health information to partners around the State. HAN has a document library available for routine, non-emergent collaboration within the public health system with local health departments, tribal, and hospital partners;
- SERV-OR: Volunteer registry for licensed health professionals.
- EM Track: A web-based system for tracking patients from an incident scene to admission to a hospital.

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;
- Logistics (SNS) movement and distribution is heavily reliant on transportation. MOU with ODOT for that, but may need to partner with State ECC to get a work-around if ODOT couldn't move it. Not sure how that would occur absent viable road infrastructure;
- Medical system overwhelmed and unable to provide care due to damaged facilities;
- Public Health has no transportation capabilities for this type of logistical movement and supply (agency only has a few motor pool cars, for the most part), nothing that could be used as backup transport for SNS;
- Isolated care locations would quickly run out of supplies;
- After initial trauma issues are cared for, subsequent medical surge will be chronic care (examples-blood pressure, diabetes, dialysis, etc.). Limited hospital resources to offer care typically received. It is extremely likely resources will be needed to move people out of State for care;
- None of private sector health care has long-term capabilities if their normal day-to-day logistics is cut off. No back up warehouses or caches of supplies that would even come near what would be needed post-quake. Statewide, the system would run out of supplies, medications, hospital beds, and providers almost immediately;

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- Limited availability in Oregon of pre-positioned pharmaceutical and medical supply caches. Agreements in place with certain pharmaceutical wholesalers for just in time delivery of certain products;
- Some hospitals have warehouse storage for supplies, but they only have 24-72 hours of supplies under a “normal use” situation;
- Lack of interoperability (i.v. tubes, for example, are all different sizes and they all have very specific purposes for individual care). There are very few linkages between medical supplies, so that makes it harder on the providers and facilities because what they need for each patient is very specific;
- Oregon hospitals and health systems have been developing medical surge plans that take into account both early patient discharge and transfers, expansion of bed capacity and establishment of Alternate Care facilities, among other strategies. Sufficiency of this surge capacity is directly related to the extent of the surge event in question;
- Regulations and Policies that could hinder response:
- Legal issues for triaging doctors in this scenario are a problem. Many medical providers have become unwilling to serve during these types of disasters for this reason. Governor has authority by statute to waive certain rules;
- No legal mechanism for public not wishing to be quarantined;
- Challenge of prioritizing who is the priority for limited medical resources.

Support Needed Immediately After a Catastrophic Event

- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Security of SNS;
- Medical system overwhelmed and unable to provide care due to damaged facilities, will need resupply and additional personnel to manage, or will require mass patient transport to locations more able to deal with surge;
- Would be working with Federal counterparts to bring in Federal medical stations and other supplies (NDMS – National Disaster Medical System)- Example: 250-bed units of care to take loads off hospitals;
- Would require immediate Federal and out-of-State medical team assistance:
- D-MAT, D-VET (veterinary teams), D-MORT (Disaster Mortuary Teams);
 - Additional supplies from SNS;
 - American Medical Response (AMR) medical transport assistance;
 - Providing supplies to isolated care locations;
 - Logistical support;
- Public Health will work on rule modifications for patient transport with Emergency Medical Services (EMS) Ambulance Service Area (ASA) contract: Public Health would work on rule modifications for patient transport following scenario.

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3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for additional DAS CSZ information

- Provide resource support (locating, purchasing and coordination of delivery of resources) to support the ESF-8 mission.

3.2.2 Department of Agriculture

See ESF-11 for additional ODA CSZ information.

The Animal Health and Identification Division provide veterinarian services to control and eradicate animal diseases, especially those transmissible to humans, livestock and birds. The Division provides guidance and assistance to local jurisdictions for response to disasters that involve domestic animals.

Priorities

- Damage assessment and staffing of the agency AOC;
- Establish essential communications;
- Response to distressed animals and/or diseases effecting domestic animals;

Assets

- Agency has own AOC for emergency operations, however will send a liaison to the ECC;
- State staff of three Veterinarians;
- Field Staff – approximately 240 (some of this number is seasonal) – brand inspectors who document testing that is done on domestic animals so that they can be shipped in and out of State to sustain quality control and commerce capability;
- Team of private veterinarians 125 – 150 that have been credentialed and trained in ICS response activities that can be called upon to assist the State. These team members are under contract with the Department of Agriculture;
- Have four animal response trailers located throughout the State;
- Have two livestock trailers capable of hauling mobile corrals;
- Have MOU's with veterinarians Statewide to provide assistance;
- Have MOU's with veterinarians to augment ODA response Statewide;
- OSU can provide responders for disease control;
- Have livestock sheltering areas east of the Cascades. Have private landowner information to possibly be able to establish alternate private livestock sheltering capabilities.

Capabilities

- Testing and movement of domestic animals to areas of the State/ out-of-State able to care for displaced livestock;
- Re-establish commerce capabilities and regulatory standards;

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- Monitor safety and environmental health of Confined Animal Feeding Operations (CAFO);
- Assist with coordination, control and eradication of outbreak of zoonotic diseases that could affect humans;
- Assure food safety and security in coordination with other agencies, as appropriate;
- Coordination for the disposal of animal carcasses resulting from disease;
- Assist with pet sheltering;
- Staff is able to telework throughout the State with communication resources intact;
- Can sustain basic operations for three to four days with current human resources.

Catastrophic Event Operational Challenges

- Two thirds of the available staff is located west of the Cascades. This scenario may impact their ability to respond;
- Main Department of Agriculture building in Salem will need generator power;
- Determining and acquiring disposal sites for dead animals;
- Currently have no radio communications capabilities;
- No amateur radio capability.

Support Needed Immediately After a Catastrophic Event

- Two thirds of the available staff is located west of the Cascades. This scenario may impact their ability to respond.
- Request veterinarians from out of State who would help manage incident response;
- Will require assistance of Federal Veterinarian Response Teams;
- Field teams will require fuel and road access to areas as needed;
- Main Department of Agriculture building in Salem will need generator power;
- Potable water;
- Currently have no radio communications capabilities;
- No amateur radio capability;
- ODA will need fuel for animal carcass disposal, and disposal of contaminated feed. (Burning).

The **Food Safety Division's** team of field inspectors and staff license and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption. This includes shellfish harvesting, dairy, retail grocers, bakeries, non-alcoholic beverages, custom meat, eggs, warehouses and food manufacturing. ODA coordinates with the State Health Officer on milk and other food products in commerce in response to nuclear incidents and works closely with the Oregon PHD in response to all food emergencies.

Priorities

- Human health is primary priority;
- Animal health is secondary priority;
- Water testing of private wells being used as a water source for industrial food processing.

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Assets

- Have resources to assist county and State Health Departments with food safety issues;
- Have Statewide contact list for food producers and licenses.

Capabilities

- Licensing organization for - food processors, warehouses, grocery stores, delis, bottled water, milk producers, dairies;
- Inspect all facilities once a year and more often if necessary;
- Contract with FDA for inspections;
- Investigate food safety issues – and recalls;
- Responsible for activating FERN – Food Emergency Response Network and CCAP – Chemistry Cooperative Agreement Program;
- Provide expertise in determining the safety of sundry food supplies from grocery stores that are not perishable or contaminated to augment sheltering food needs.

Support Needed Immediately After a Catastrophic Event

- Will not have the capability of testing and verifying the safe handling of food being brought into impacted areas for human or animal consumption;
- Quality assurance of food will have to be done prior to being used in the State.
- 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;
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Additional food inspectors will be needed to ensure food safety;
- Communications capabilities for ODA will need to be improved to communicate post-incident.

Laboratory facilities provide analysis for food and dairy samples, animal diseases, animal feeds, shellfish, fertilizer, water, plant pest and disease, pesticides, and market assurance analysis. Analyses are also provided for the Food Emergency Response Network (FERN).

Assets

- Animal lab in Salem for inspection and testing prior to shipping in and out of State;
- Portland Animal lab is located on the Naito Parkway, Portland;

Capabilities

- Can test Oregon food products destined for overseas shipments;
- Can assist the Department of Health with testing drinking water resources, as needed.

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The **Natural Resources Division's** mission is to conserve, protect, and develop natural resources on public and private lands. Primary program areas include: water quality, confined animal feeding operations, smoke management, land use, and Soil and Water Conservation Districts.

Capabilities

- Can assist county Health Departments with water testing;
- Can provide technical expertise in long term recovery of Agricultural production and conserving natural resources.

The **Pesticides Division** regulates the sale and use of pesticides, provides testing and licensing for all users of restricted-use pesticides, is responsible for fertilizer registration, and investigates incidents of pesticide misuse. It's Pesticide Analytical and Response Center (PARC) functions as a clearinghouse for information on alleged and actual health and environmental incidents and reports its findings. ODA investigates these incidents and reports its findings.

Assets

- Has licensing information of pesticide appliers.

Capabilities

- Can assist in sampling and ensuring safety of water supply;
- Coordinates with DEQ on providing pesticide information.

The **Plant Division** works to exclude, detect, and control or eradicate serious insect pests and plant diseases;

- Can provide support to public health matters for radiological incidents consistent with the Advisory Team for environment, food and health.

The **Food Safety Division's** team of field inspectors and staff license and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption.

Capabilities

- Field staff with expertise to assist local and State health departments with food inspections for safe distribution and consumption;
- Assist State and local public health departments as necessary;
- Will need additional field staff from out of State that are already certified.

Support Needed Immediately After a Catastrophic Event

- Will not have the capability of testing and verifying the safe handling of food being brought into impacted areas for human or animal consumption;
- Quality assurance of food will have to be done prior to being used in the State.
- 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.
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;

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- Additional food inspectors will be needed to ensure food safety;
- Communications capabilities for ODA will need to be improved to communicate post-incident.

3.2.3 Occupational Safety and Health Division

Oregon OSHA: Ensures employers understand their responsibilities for protecting their workers, especially during emergency response and recovery operations. Enforces occupational safety and health rules, investigates workplace fatalities, major accidents, and safety and health complaints. Coordinates and performs the actions identified within the Worker Safety & Health Support Annex of the National Response Framework, or State equivalent; provides occupational safety and health technical assistance to other State and local entities; assesses responder safety and health resource needs, e.g., OSHA on-site assistance, incident-specific personal protective equipment protocols, training, safety and health monitoring.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Respond to request to send liaison with State ECC.

Assets

- OR OSHA has field offices around State.
 - Location of field offices: Medford, Eugene, Salem, Bend, Portland, Pendleton.
 - Pendleton is a satellite office.
 - Oregon OSHA Laboratory is located in Portland.
- Vehicles for staff are located at each field office;
- Uses standard communication assets (phones, cell phones, internet);
- Uses the DCBS data network administered by DAS. DCBS/Oregon OSHA would be dependent on DAS for restoration of computer access;
- Operates a nationally certified occupational health laboratory in Portland. This well-equipped lab analyzes samples collected by compliance officers and consultants to determine chemical compositions and concentrations of hazardous substances to which workers may be exposed.

Capabilities

- Oregon OSHA serves as a regulatory agency with Statewide authority over public and private sector operations and work for worker safety. Worker safety and health complaints would be addressed through established enforcement policies and procedures. If there is a worker safety & health issue, Oregon OSHA may be tasked with ensuring an employer takes care of the issue;
- Works with other State departments to answer questions on worker safety and health;
- Provides technical assistance (answering questions, distributing information, etc.) regarding worker safety and health;

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- Education and training for responders and workers on dealing with safety and health hazards;
- Oregon OSHA can assist employers in complying with regulatory requirements for personal protective equipment;
- Liaises with Federal OSHA to ensure worker health and safety;
- Mechanisms are already in place to work with Federal OSHA in an earthquake scenario. In the context of disaster recovery, Federal OSHA will work with FEMA on the national level, assisting Oregon OSHA. This would go back through ECC for tracking ;
- Coordinates communication with labor unions, contractors, and other organizations regarding responder safety and health issues;
- Oregon OSHA has a large inventory of sampling equipment for a variety of substances and hazards, and staff trained on their use;
- Can coordinate with Federal OSHA to provide specialized response teams, for example, construction, biological or radiation safety. Access to and availability of Federal OSHA specialized response teams is contingent on federal/regional priorities.

Support Needed Immediately After a Catastrophic Event:

- By nature of a catastrophic event, 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;
- Electrical power backup for the Capital Mall buildings is serviced off the power grid, and OR-OSHA field offices do not have generators for emergency power backup;
- Oregon OSHA communications are dependent on telecommunications and internet;
- Loss of computer and data systems would impact Oregon OSHA operations significantly, however, enforcement citations could be issued through a manual process;
- Might require communication equipment and most likely vehicles, fuel or transport to work locations;
- No private sector contractors that could help with Oregon OSHA regulatory work, which would be bulk of post-quake work;
- Would need to turn to Federal OSHA for assistance, if necessary.

3.2.4 Department of Fish and Wildlife

See ESF-11 for complete ODFW CSZ information

- ODFWs ESF-8 responsibility is to provide assistance to ODA with control and eradication of an outbreak of a highly contagious or economically devastating animal/zoonotic disease.
- ODFW can assign assets not deployed on other ESF missions to assist with ESF-8 operations as requested.

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3.2.5 Oregon Military Department

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Recall of personnel;
- Contact and Establish contracted medical re-supply pipelines;
- The Oregon National Guard may engage in immediate response 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

- One medical company located in Salem, has minimal ambulance capability, but capable of non-standard medical evacuations;
- Two air medical groups- located at PANG and Kingsley Airfield;
- Fatality search and recovery team- located at PANG, capable of storing 24 fatalities;
- UH-60 Blackhawk helicopters based in Salem;
 - Medical evacuation capability.
- CH-47 heavy lift helicopters based in Pendleton;
- CERF-P medical group consists of 45 personnel and is capable of mobile triage and stabilization in preparation for movement to higher care facility;
- Can request from National Guard Bureau for additional medical assets (96 hours to one week for arrival);
- Each National Guard unit Statewide has limited basic medical capabilities;
- Can perform casualty clearing/staging and other missions as needed including aero-medical evacuation and medical treatment.

Capabilities

- Triage and stabilization of wounded;
- Can provide available National Guard medical units, when authorized and necessary to provide support. Can perform casualty clearing/staging and other missions as needed including aero-medical evacuation and medical treatment;
- Fatality management;
- Minimal patient transport;
- Trauma nurses and doctors (no surgical capabilities);
- Provide support or direct care based on ESF-8 missions;
- Can provide available logistical support to public health/medical response operations.

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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.
- Unknown percentage of National Guard personnel serving as first responders as their full-time profession;
- Accessibility to fuel resources;
- May have challenges recalling trained medical personnel that are working in hospitals as their primary profession.

Support Needed Immediately After a Catastrophic Event

- Resupply of medical supplies;
- Fixed wing air transportation;
- Additional ambulances.

3.3 Adjunct Agency

3.3.2 American Red Cross

Priorities

- Life and safety of staff and public;
- Mass care of survivors;
- Provide and support sheltering, feeding, distribution of emergency supplies, supporting the bio-medical needs of impacted communities; Support responder and survivor information needs – where survivors can find assistance;
- Work with the Governor's office for transition to long term recovery.



Assets

- Within the State of Oregon, the American Red Cross has five chapters that provide program and services:
 - **Oregon Trail Chapter:** *Serving Baker, Clackamas, Clatsop, Columbia, Hood River, Gilliam, Morrow, Multnomah, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington and Yamhill Counties.* Oregon Trail Chapter serves as the lead chapter for the State of Oregon.
 - **Oregon Mountain River Chapter:** *Serving Crook, Deschutes, Grant, Harney, Jefferson and Wheeler counties and Warm Springs Reservation.*
 - **Oregon Pacific Chapter:** *Serving Benton, Coos, Douglas, Lane and Linn Counties.*

ESF 8. Public Health and Medical Services

- **Southern Oregon Chapter:** *Serving Curry, Jackson, Josephine, Klamath and Lake Counties.*
- **Willamette Chapter:** *Serving Lincoln, Marion and Polk Counties.*
- 12 supply caches, mostly trailers, across the coastal communities, staged out of the inundation zone in earthquake resilient buildings;
- National ARC caches are available to mobilize as needed;
- 100 person shelter set up, 100 cots, 200 blankets, administrative supplies to support shelter set up and occupation, basic first aid health items, and personal hygiene items per cache;
- MRE's in pre staged areas, however are in buildings of questionable integrity for large magnitude earthquake;
- ARC is capable of providing tent sheltering if no buildings meet their safety, security, and accessible criteria;
- 40 Caches (trailers) each capable of providing shelter for 100 people, in the State of Oregon, mostly trailers, up and down the I-5 Corridor. The bulk of supplies are in utility trailers 18 – 20 feet long. Can be moved by semi-trucks. These trailers contain non-perishable items;
- Reno, NV and the Umatilla Chemical Depot are large fixed site storage areas for disaster field supplies which includes mass care supplies. Inventory fluxes during the year with multiple disaster declarations and the need to ship out the supplies. These two storage areas have current contracts with common carriers already in place;
- Some MOU's exist with school districts;
- Six Emergency Response Vehicles (ERV's) in the State;
- Five 4wd SUV's;
- One EKRK – Emergency Kitchen Response Vehicle (Portland);
- Capable of heating and serving 250 meals 3 x per day;
- Amateur radio (Ham) equipment in Chapter offices and some of the sheltering trailers;
- ARC – has MOU's with Amateur Radio Emergency Services (ARES) to provide communications;
- ARC – emergency response vehicle has radio capabilities, however it is line of sight – no repeater capability. ARC has its own dedicated National Red Cross radio frequency, (4742). Radio Base Station is in the ARC office in Salem;
- Two Satellite radios in the State – One in Salem office and one in Lincoln County;
- ARC Office in Salem has a PACKET radio;
- ARC offers PIO's to interface and work with JIC for public messaging regarding sheltering and assistance;
- Two Joint Information Centers in Salem – one in Chemeketa Community College and one with CCTV;
- MOU with FEMA agreement for resource tracking and planning;

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- ARC Blood Center (Portland) processes and distributes 90% of the blood supply in Oregon. Have a national testing lab by Portland Airport.

Capabilities

- Upon request, assist in establishing, coordinating, and managing the State's sheltering missions to include supporting medical and mental health needs;
- Provide emergency first aid, consisting of basic first aid and referral to appropriate medical personnel and facilities, supportive counseling, and health care for minor illnesses and injuries to incident victims in mass care shelters, the JFO, selected incident cleanup areas, and other sites deemed necessary by the primary agency;
- Provide supportive counseling for family members of the dead, for the injured, and for others affected by the incident;
- Acquaint families with available health resources and services, and makes appropriate referrals;
- Support emergency medical needs on site;
- The ARC can expand its operations as a disaster requires;
- ARC is involved in distribution of emergency relief items, and case management, at its service delivery sites.
- Red Cross Health Services volunteers coordinate their efforts with those of the local health authorities and the medical and nursing communities. When staffing a shelter, dependent on staffing resources, a Red Cross Health Services nurse will be assigned. Health Services responsibilities carried out in any Red Cross facility are supervised by a Red Cross nurse, in consultation with a physician. Nurses, paraprofessional health care personnel and other personnel with acceptable first aid training or experience will be used, commensurate with their abilities, to provide the necessary health services coverage to clients in the shelters;
- The ARC has developed relationships with local emergency program managers and coordinates its response with local governments, as well as providing a liaison to the State ECC;
- Maintains agreements with local, State, and national organizations that support State ESF 6 and ESF 8 activities;
- ARC response staff can interface with State and volunteer teams to coordinate sheltering and feeding;
- Life Safety and Asset Protection Function and Staff Wellness Activity for responders – law enforcement professionals and medical professionals combined look after the health and wellbeing of ARC volunteer staff;
- Mental health staff is available to ARC volunteer staff to assist with mental and emotional issues during this type of event;
- In most instances – an automatic push of equipment and personnel begin to respond (push) to an accessible staging area;
- Can do medical screening for intake into general population shelters. The medical screening identifies people who may need functional needs support services for special needs and medical service;

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- Citizens who are medically fragile or need acute care will be referred to the Health Department for sheltering needs;
- Provides the 'Safe and Well' system for anyone who wishes to place their name in the data base for friends and relatives who would be inquiring about their safety. This is a voluntary program available to disaster survivors;
- The 'Safe and Well' program and Red Cross feeding operations can be extended for those who wish to shelter in place or in neighborhood camps;
- Red Cross has a program to process and train spontaneous volunteers;
- Red Cross have professionals to provide information to the general public and media regarding their services;
- Refers all concerns regarding animal health care, safety, or welfare to American Veterinary Medical Association contact(s) in the disaster area. These contact people are veterinarians affiliated with national, State, county, or local veterinary associations.

Catastrophic Event Operational Challenges

- Volunteer workers will be impacted by this event and the number of available workers will decrease exponentially;
- Need agreements with ODOT / OMD for transportation of life sustaining supplies;
- Health codes prohibit pets from entering a shelter. ARC works to co-locate pet care facilities next to shelters. ARC partners with other organizations to provide logistically close care and feeding for pets.

Support Needed Immediately After A Catastrophic Event

- Fuel;
- Generators;
- Medical supplies and prescriptions for chronic illnesses among survivors;
- Accessible roadways into the impacted areas;
- Supplies to support special needs and medical needs at shelters (medications);
- Additional trained personnel;
- Pre-determined staging areas for this event to enable an immediate 'push' of personnel and supplies.

4 ESF-8 Concept of Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Public Health and/or Medical assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

The Oregon Health Authority – Public Health Division has the ability to activate for public health emergencies as identified in their operations plan.

During the response period, The Oregon Health Authority – Public Health Division has primary responsibility for the analysis of public health and medical assistance, determining the appropriate level of response capability based on the requirement

ESF 8. Public Health and Medical Services

contained in the action request form as well as developing updates and assessments of public health status.

4.1 Objective

To ensure emergency provision of the State's resources for medical care; to facilitate and/or coordinate the provision of private resources for medical care for survivors in impacted areas; and to supplement and support disrupted or overburdened local medical service personnel and facilities.

4.2 Challenges

- Transportation limitations will require injured people to be triaged/treated in place;
- Loss of power/water will limit surviving hospitals ability to provide services;
- The inability for medical providers to deliver at a present standard of care will result in lower successful treatments of injury and illness;
- Surviving patients in damaged hospitals, nursing homes, and assisted living centers will need to be relocated.

4.3 Assumptions

- Loss of available hospital capacity combined with high numbers of casualties will overwhelm existing capability;
- Hospitals will require additional resources to provide medical evacuation services;
- Assisted living centers will not have sufficient staff or equipment to provide for evacuation of survivors;
- Casualties and critically injured persons in coastal communities will have to be transported by air or sea due to significant damage to road networks.

4.4 ESF 4 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Ambulance and emergency medical support will be inadequate for need.	▪ Activation of National Ambulance contract ▪ Air ambulance assistance from in and out of State ▪ DMAT
Definitive medical treatment facilities will be significantly damaged and unable to medically support the number of casualties created by the event.	▪ Activation of NDMS ▪ Evacuation of patients out of area ▪ Deployment of Federal Mobile Medical Facilities ▪ Augmentation of personnel ,equipment and supplies to surviving medical facilities
Medical support to chronically ill will not be available within the degraded medical system. To keep these patients from developing more serious issues and adding to the medical problems, pharmaceutical and other medical services will be required.	▪ Strategic National Stockpile and other pharmaceutical support to affected population ▪ Identification and evacuation of these patients to areas where required support is available ▪ Mental health and other medical support will be needed to augment shelter operations and the general public.

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4.5 Concept of Operations

The initial stage ESF-8 response will consist principally of:

- Alerting hospitals and county health offices in unaffected areas of the State to request an inventory of available personnel, supplies, and equipment resources;
- Initiating requests for medical mutual aid through EMAC and FEMA;
- Determining the condition of medical facilities in the impacted areas. Afterwards, medical response will consist of treating victims by either augmenting local medical capabilities or evacuating victims.

ESF-8 functions include but are not limited to:

- ESF-8 will be responsible for the coordination of services, equipment, supplies and personnel to meet the health and medical needs resulting from a catastrophic earthquake and resulting tsunami;
- Coordinate and mobilize all professional and reserve medical personnel to assist in patient care;
- ESF -8 will coordinate the needs assessment and will assume the lead in monitoring potential health hazards;
- Coordinate requests to the EOC for additional health/medical care personnel, equipment and supplies;
- Monitor and react to food/drug safety, radiological/ chemical and biological hazards;
- Coordinate with ESF-3 and ESF-6 on potability of water, wastewater disposal, solid waste disposal and vector control monitoring;
- Monitor medical command and control;
- Determine condition and capacity of hospitals in the impacted areas;
- Coordinate the registration, notification, transportation and sheltering of special needs persons in the community who are unable to respond independently to an emergency;
- Coordination with ESF-6 on special needs shelter medical requirements;
- Incorporating all medical resources such as Strategic National Pharmaceutical Stockpile (SNPS) into earthquake planning and response;
- Determine transportation needs and capabilities, and coordinate with ESF-1 to obtain transportation requirements to support ESF-8.
- Preparing plans to integrate the NDMS into the State's disaster response. National Disaster Medical System (NDMS) consists of the Disaster Medical Assistance Team (DMAT), the Disaster Mortuary Operational Response Team (DMORT), Medical Support Unit, and Mental Health and Stress Management teams.
- Coordinate use of non-traditional facilities such as hotels or containerized medical units to treat disaster victims in the impacted areas;
- Crisis counseling and psychological first aid will be needed as a result of this event. ESF-8 will assist in the provision of counseling services into the impacted areas as requested;

ESF 8. Public Health and Medical Services

- ESF-8 will coordinate with Federal ESF-8 to implement public health plans to mitigate the spread of diseases;
- As indicated in the table below, under this scenario, a “Level 4” emergency would be the issue. The State is responsible for convening, developing and managing Unified Public Health Incident Management for incident action planning and resource allocation.

State/Regional and Local Public Health Emergency Levels and Responsibilities

Description/Criteria	Responsibility
Level 1: Local Public Health Emergency with Local Response Nature and severity is such that the event can be operationally managed within the resources and expertise of the responsible Local Health Departments (LHD(s))	LHD responsible for all aspects of response organization and operations
Level 2: Local Public Health Emergency with Potential to Expand Nature and severity is such that the event <i>could</i> be operationally managed within the resources and expertise of LHD(s), but State resources and expertise could improve effectiveness of response	LHD responsible for all aspects of response organization and operations including requesting/assigning State and other parties to assume selected aspects of response
Level 3: Regional Public Health Emergency Nature and severity of event is such that it <i>cannot</i> be managed within the resources and expertise of LHD(s) AND/OR There are operational, policy or governance issues of definite interest beyond the affected area	LHDs and State jointly responsible for high-level aspects of incident management, i.e., State/Local Unified Public Health Incident Management and resource management
Level 4: Statewide or Multi-Area Public Health Emergency Nature and severity of event is such that it <i>must</i> be managed on a cohesive Statewide basis in order to apply necessary expertise, and appropriately manage scarce resources across a number of locations	State is responsible for convening, developing and managing Unified Public Health Incident Management for incident action planning and resource allocation

5 Supporting Documents

- National Response Framework, ESF 8 – Public Health and Medical Services
- County ESF 8 Annexes
- Pandemic Influenza Emergency Management Plan
- Oregon Behavioral Health All Hazard Response Plan
- Oregon Animals in Disaster Plan

6 Appendices

None at this time.

9

Cascadia Subduction Zone Catastrophic Annex

ESF 9 – Search and Rescue

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ESF 9. Search and Rescue

ESF 9 Tasked Agencies	
Primary Agencies	Oregon Emergency Management (OEM) Office of the State Fire Marshal (OSFM)
Supporting Agencies	Department of Aviation (AERO) Oregon Military Department (OMD) Oregon Department of Transportation (ODOT)
Adjunct Agencies	American Red Cross (ARC) Civil Air Patrol (CAP) Department of Corrections (DOC)

1 Purpose

Coordinate the provision of State and outside agency resources for Search and Rescue (SAR) and Urban Search and Rescue (USAR) operations including, but not limited to, the location, recovery and extrication of victims who become lost or entrapped as the result of a major disaster or life threatening emergency. SAR and USAR activities include locating, extricating, and providing onsite medical treatment to victims trapped in collapsed structures.

2 Scope

- ESF 9 encompasses Search and Rescue (SAR) operations within the State of Oregon through Oregon Emergency Management, and USAR through the OSFM.
- Missing aircraft related to SAR missions are addressed by a document entitled "Agreement between the State of Oregon and the Executive Agent for Inland SAR" maintained at OEM.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Oregon Emergency Management

- OEM is the coordinating agency for wilderness SAR in Oregon for all events requiring Federal assets on behalf of the county sheriffs' office. In addition, OEM is the coordinating agency for missing aircraft within its borders.
- Coordinate rapid deployment components to provide specialized lifesaving assistance to local authorities when activated for incidents.
- During a Federally declared disaster, OEM takes a supporting role to FEMA who coordinates Federal assets.

3.1.2 Office of the State Fire Marshal

See ESF-4 Firefighting for additional OSFM CSZ information

Priorities

- Life and safety of responders and affected public;
- Assure that USAR teams, engineers and equipment are available for response;
- Coordination and direction of USAR resources of the State;
- Incident management.

Assets

- Three Incident Management Teams for coordination, which include certified safety officers;
- Three type 1 USAR trailers in the State: Clackamas, Salem, Eugene. Personnel resources come from local fire departments;
- 13 HAZMAT trucks and personnel in the State – regionally deployed. Trucks include hand pumps which can be used to hand pump gas. HAZMAT Teams in Astoria and Coos Bay will be impacted by the event, and cannot be counted on;
- HAZMAT and SAR teams are trained to the national standard;
- All specialized responders are required to bring enough personal food and water for 72 hours;
- 13 Deputy Fire Marshals throughout the State.
- 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.

Capabilities

- Responsible for rapid deployment of components of the State USAR response system to provide specialized lifesaving assistance to State, local and other authorities when appropriate;
- All search and rescue equipment is in containers that can be flown into an impacted areas;
- Conduct and coordinate light to heavy urban search and rescue;
- OSFM coordinates and directs the training, equipment and use of the State's structural collapse resources. Oregon USAR Task Force 1 is staffed by local firefighters organized under a State agreement and member-elected governance board;
- Oregon Task Force 1 (OR-TF1) assists in structural collapse and technical rescue incidents Statewide, at the request of the Governor. Covering multiple jurisdictions, the team is organized geographically in north and south regional response teams;
- OR-TF1 is capable of providing full incident support, up to a Type I Collapse Search and Rescue (National Incident Management compliant). Oregon Task Force 1 may

ESF 9. Search and Rescue

be included in mobilization of State Regional Hazardous Materials Response Team, or the State Fire Marshal's Incident Management Team;

- Inspection of hospitals and care facilities to ensure that they meet the 'life safety' code;
- Providing local communications between responders and IMT's;
- Transportation of communication trailers to impacted areas;
- Capable of continuity of operations without power / computers.

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;
- Due to the scale of this incident, existing USAR teams will be immediately overwhelmed and likely isolated;
- 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 firefighting capabilities.

Support Needed Immediately After a Catastrophic Event

- USAR teams and equipment from outside of the impacted area, mobile interoperable communications, and base camps;
- Only two structural engineers available (assigned from ODOT), need will be much greater;
- Equipment and repair abilities to fulfill ESF-9 mission tasks;
- Fuel for generators and responder vehicles;
- Roadway accessibility;
- Air resources to move equipment and personnel.

3.2 Support Agencies

3.2.1 Department of Aviation

See ESF-1 for complete ODA CSZ information

- Department of Aviation provides funding for search and rescue operations with 50% of pilot registration fees going to OEM Search and Rescue;
- Could coordinate aviation asset needs for SAR missions.

3.2.2 Oregon Military Department

See ESF-7 for complete OMD CSZ information

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Recall of personnel;
- Identify fuel sources;
- The Oregon National Guard may engage in immediate response 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

- CERFP has one search and recovery, search and rescue company sized element (50 personnel), capable of USAR;
- 1-82 Cavalry out of Bend has had training and experience in assisting with wilderness search and rescue operations;
- UH-60 Blackhawk helicopters based in Salem;
 - Medical evacuation capability.
- CH-47 heavy lift helicopters based in Pendleton;
- Heavy construction equipment and operators (bulldozers, backhoes, etc.) - no cranes.

Capabilities

- Urban search and rescue;
- Integrated or in support of incident commander and USAR Task Force #1 or #2;
- Aerial reconnaissance, transportation of personnel, operations and relief supplies and equipment via fixed wing and rotary aircraft;
- Debris clearance;
- Communications support to ESF-9 operations;
- Heavy construction equipment and operators (bulldozers, backhoes, etc.) - no cranes;
- Contracting assistance.

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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- 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.
- Accessibility to fuel resources;
- Limited petroleum storage;
- Some of equipment for CERFP located at PANG, unit is located in Clackamas County, planning scenario may have unit separated from their needed equipment;
- Lack of training and need of oversight from OSFM USAR Task Force(s) for confined space/ trench rescue operations.

Support Needed Immediately After a Catastrophic Event

- CERFP (CBRNE Emergency Response Force Package) urban search and rescue team would require structural engineer(s) from another agency;
- US Army Corps of Engineers provision of structural engineers and specialists for ESF-9 missions;
- FEMA USAR Teams;
- DCERF (Defense Chemical, Biological, Radiological and Nuclear Response Force) assistance.

3.2.3 Oregon Department of Transportation

See ESF-1 for complete ODOT CSZ information

Priorities

- Life and safety of responders and affected public;
- Determine and deploy available ODOT resources available for ESF-9 response;
- Support of OSFM through provision of qualified structural specialists to participate on the USAR Task Force and mechanic support for equipment cache trailer maintenance and deployments.

Assets

- Can provide two structural engineers to support the State Fire Marshal USAR teams;
- Mechanic support for equipment cache trailer maintenance and deployments;
- Semi-tractor to pull OSFM USAR equipment.

Capabilities

- Provide transit to OSFM USAR teams and equipment;
- Provide structural engineers (only 2) who determine structural integrity for rescuer safety. ODOT USAR support team become part of the USAR teams and report to the State Fire Marshal Incident Commander for assignment.

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;

ESF 9. Search and Rescue

- Only two structural engineers available for this mission (assigned to OSFM), need will be much greater;
- Personnel living and working in the impacted areas will be compromised by the event;
- Accessible and usable roadway networks;
- Due to the scale of this incident, existing USAR teams will be immediately overwhelmed and likely isolated.

Support Needed Immediately After a Catastrophic Event

- USAR teams and equipment from outside of the impacted area, mobile interoperable communications, and base camps;
- Only two structural engineers available (assigned from ODOT), need will be much greater;
- Equipment and repair abilities to fulfill ESF-9 mission tasks;
- Fuel for generators and responding vehicles/equipment ;
- Roadway accessibility;
- Air resources to move equipment and personnel.

3.3 Adjunct Agencies

3.3.1 American Red Cross

See ESF-6 for complete ARC CSZ information

- Provide food, water and support resources in for SAR and USAR missions as requested in a major disaster.

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

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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, which segments that 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.

3.3.3 Oregon Department of Corrections

Priorities

- First priority for all Oregon DOC facilities is to make themselves and their facilities whole and functional first. No assistance will be available to the response effort until this is complete (keep public safe by ensuring inmates stay inside);

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- Facilities are contained and able to get up to operational status without outside assistance
- May take one day to one week (or longer?) to get “whole” before they can help State and accept mission assignments
- Must clear facility access paths and roads on site before they can even get to ingress/egress roads;
- Can take State mission assignments after prisons are secure and “whole” again.

Capabilities

- Provide Central Distribution Center (CDC) as possible repository for national stockpile operations;
- Inmate crews can help with USAR & fire teams (set up base camp, provide food, keep things going for the professional USAR teams from the base camps);
- Clean-up crews (debris removal);
- DOC can supply trained inmate flaggers;
- Can provide temporary housing (fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing
- Provide equipment and operators;
 - Evacuations (moving people)
 - Trucks, bulldozers, other heavy equipment
- Can possibly augment response with DOC fuel supplies.

Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations;
 - Semi-trucks (sleepers)
 - Also have refrigeration & dry good trucks
 - Vehicles have manual fuel pumps on board
 - Some earthmoving equipment (bulldozers, dump trucks)
 - Staff at every facility have CDLs
 - Trained forklift operators (staff and inmates)
- Approximately 143,000 gallons of diesel stored at central processing location;
- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Limited skill levels on inmate crews;
 - Down tree cleanup & debris cleanup
 - Chainsaw brigade

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- Flaggers
- Maintenance
- Mechanics
- Plumbing, carpentry and electricity (inmates);
 - Though felons cannot hold professional licenses, they can perform these duties with supervision
 - Assist journeyman and licensed professionals – inmates trained to this level
- ODF wildfire assistance camp;
 - Crews no longer in use since 2011
 - Equipment and “mobile camp” still exists and could be utilized
- Fire crews (can be deployed with responders & under supervision)
 - Trained to live in tents
 - Trained to live in fire response environment
 - Have own resources / supplies with them
- Two Structural engineers on contract (one in south part of Oregon, one in northern);
- Staging Areas could be located outside on DOC properties;
- Mobile Kitchen (Food prep for crews / personnel / housing);
 - USAR team support (at base camps)
 - Fire team support (at base camps)
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death
 - Peer counseling
 - Family death
 - CSIM counselors (ESS group) have lawyer/client privileges
 - Could be used in State ECC and other facilities for responder staff members
- Gang Task Force (could be tasked by State and used for security);
 - Not as prepared for riot-type situations as cops are
 - Can be deputized to function as law enforcement
 - Could provide security for firefighters and EMS
- ODC is self-sustaining for approx. 14 days (similar for all facilities);
 - Stores of salt, gravel, etc., to maintain their properties kept on site at prisons (but ingress/egress away from DOC facilities would need ESF #1 assistance)
 - Prisons keep food supplies for four days
- DOC personnel are trained to be deployed to other DOC facilities;
- Has retiree cadre that could be called upon to assist with DOC operations;

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- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities
- DOC Facilities have generators and back-up fuel;
- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond
 - Very comprehensive plans for all scenarios
 - Plans exercised (and plans activated for many other scenarios routinely)

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;
- DOC can go two-three days (realistically, at best) without staff relief for their own facilities;
- Possibility some of DOC staff will walk off job in this event to care for families
- DOC will be short staffed immediately after any event like this and may initially need assistance with their own tasks.
- Access to DOC facilities West of Cascades.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

4 ESF-9 Operations

Ensure the synchronized deployment of local, regional, national, and international teams to reinforce ongoing search and rescue efforts and transition to recovery.

4.1 Objective:

Rapidly provide assistance to local authorities for search and rescue operations following an earthquake and resultant tsunami.

4.2 Challenges:

- Access to most severely impacted areas will be limited for both ground and air assets;
- Limited regional capability to conduct SAR operations;
- Limited availability of airports, reception and staging areas for coastal communities impacted by the tsunami.

4.3 Assumptions:

- A catastrophic earthquake and resultant tsunami will result in vast numbers of persons being in life-threatening situations requiring prompt rescue and medical care;
- Since the first 72 hours are crucial to lessening the mortality rate, SAR must begin immediately;
- Depending upon the type and magnitude of the disaster, either urban, wildland, or both types of SAR, might be mandated;
- Local, State, and federal regional 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;
- SAR personnel will potentially have to deal with extensive damage to buildings, roadways, public works, communications, and utilities. Secondary to the precipitous event, effects such as fires, explosions, flooding, and hazardous material releases may compound problems and threaten both survivors and rescue personnel;
- SAR teams will not arrive in impacted communities with enough time or resources to save lives in all collapsed structures;
- Initial search and rescue response will be a local effort, with priorities set by local government. ESF-9, ESF-4 and ESF-1 will coordinate to provide additional search and rescue teams and equipment into the Operational Areas as requested;
- Due to the anticipated damage from a strong earthquake, the FEMA USAR task forces will be needed to support the State's search and rescue operations;
- It can be expected that search and rescue mutual aid within the affected areas will be sharply reduced. The widespread regional nature of the event will affect many jurisdictions simultaneously; therefore, search and rescue teams from throughout the State will be needed to provide search and rescue of persons trapped and injured due to collapsed buildings almost immediately;
- Inclement weather and limited visibility will hinder SAR operations;
- Coordination and direction of efforts, including volunteers, will be required;
- Damaged areas will have access restrictions and will not be readily accessible except, in some cases, by air or water;
- Secondary events or disasters will threaten survivors as well as SAR personnel;
- Survivors fleeing tsunami inundation zones will assemble in designated rally points;
- Local CERT teams will have limited ability to provide immediate search and rescue functions;

ESF 9. Search and Rescue

- HAZMAT contamination will impact SAR operations;
- First responders in the impacted area will be overwhelmed and have limited ability to perform SAR.

4.4 ESF-9 Shortfalls and Requirements:

SHORTFALLS	REQUIREMENTS
Trained Personnel and Equipment to conduct search and rescue.	■ Additional trained urban search and rescue teams ■ Air search and rescue teams including hoist and rescue swimmer capability ■ Additional swift water rescue teams ■ Planning to coordinate and maximize the use of limited assets ■ Communication and coordination between and prioritization of limited search and rescue assets
Limited capability to provide specialized teams and equipment to the impacted area.	■ Establish priorities of effort for search and rescue by type ■ Training for light SAR teams (CERT and other volunteer groups, increased training for first responders)

4.5 Concept of Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Search and Rescue assets have been identified to meet the request, OEM will create an action for the specific State agencies to accomplish the task.

Immediate SAR operations are conducted in accordance with the U.S. National Search and Rescue Supplement (NSS) to the International Aeronautical and Maritime Search and Rescue Manual, which defines SAR responsibilities and provides guidance to the agencies with civil SAR mandates.

ESF-9 functions include but are not limited to:

- ESF-9 will coordinate the search and rescue response and requests for resources and identify transportation requirements to move personnel and equipment into Operational Areas. ESF-9 will consider using military resources and watercraft;
- Equipment will be immediately mobilized and ready to deploy upon orders;
- Determine transportation requirements to move search and rescue equipment into Operational Areas;
- Coordinate with ESF-2 to support ESF-9 communications requirements;
- Make a request for search and rescue assistance through EMAC;
- Identify resources necessary to support local, State and FEMA USAR teams to possibly include EMAC requested teams;
- Assess and validate the conditions of search and rescue staging area(s);

ESF 9. Search and Rescue

- Deploy liaison teams to county EOC or incident base of operations, as needed;
- Plan for and establish relief resources to replace or rotate with committed resources for extended operations;
- Coordinate other State and Federal support for search and rescue operations to include planning for reception and deployment to area of operations;
- Coordinate with ESF-1 for use of buses to transport rescue teams or rescued victims or persons evacuated from an emergency area to a safe location or emergency shelter;
- Require ESF -9 agencies maintain appropriate records of costs incurred during the event.

5 Supporting Documents

- National Response Framework, ESF-9 – Search and Rescue
- Oregon Counties ESF-9 Annexes
- County Search and Rescue Plans

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 10 – Oil and Hazardous Materials Response

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ESF 10. Oil and Hazardous Materials Response

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ESF 10. Oil and Hazardous Materials Response

ESF 10 Tasked Agencies	
Primary Agencies	Department of Environmental Quality (DEQ) Office of the State Fire Marshal (OSFM)
Supporting Agencies	Occupational Safety and Health Division (OSHD) Oregon Department of Energy (ODOE) Oregon Department of Fish and Wildlife (ODFW) Oregon Department of Forestry (ODF) Department of Human Services (DHS) Oregon Health Authority (OHA) Oregon Emergency Management (OEM) Department of State Lands (DSL) Oregon State Police (OSP) Oregon Department of Transportation (ODOT)
Adjunct Agency	Civil Air Patrol (CAP)

1 Purpose

Coordinate State support to local jurisdictions in response to an actual or potential discharge and/or uncontrolled release of oil or hazardous materials during or following a Cascadia Subduction Zone earthquake and resultant tsunami.

2 Scope

ESF 10 includes the appropriate response and recovery actions to prepare for, prevent, minimize, or mitigate a threat to public health, welfare, or the environment caused by actual or potential oil and hazardous materials incidents. Hazardous materials include chemical, biological, and radiological substances.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Department of Environmental Quality

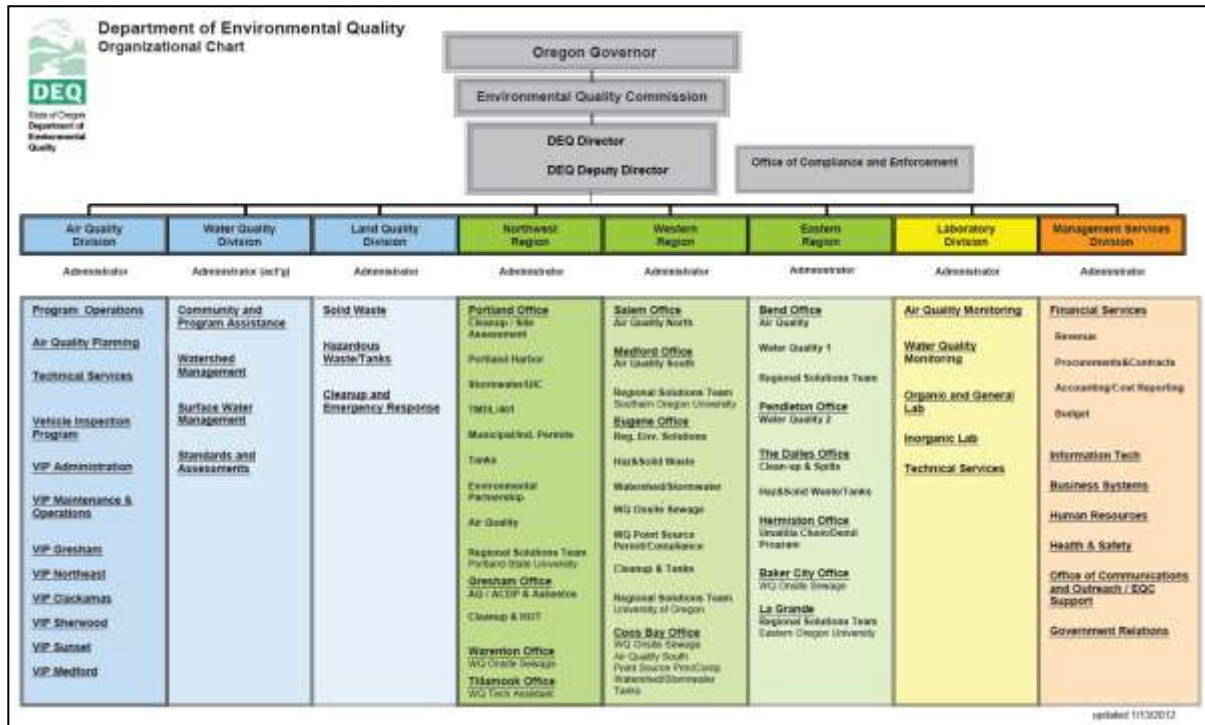
Priorities

- Restoration of DEQ response systems to normal;
- Ensure containment and removal of oil and hazardous materials from the environment;
- Recovery of hazardous materials containers that become dislodged from their primary installation site, (pesticides, anhydrous ammonia etc.);
- Contact Emergency Response Services contractors for assistance. These private sector contractors have DEQ interoperable radios;
- Coordinate with ODOT on clean up and debris removal.

ESF 10. Oil and Hazardous Materials Response

Assets

- DEQ is divided into 3 regions, and 11 branch offices. Headquarters office is located in Portland with major offices and equipment located in The Dalles, Bend and Pendleton;



- Mobile emergency response unit – trailer equipped with generators, satellite communications, computer and voice communications. Can run the trailer for a short period of time without supplemental fuels / power;
- DEQ has an on-scene coordinator in each of the Bend and Eugene offices. Two on-scene coordinators are in the Portland office;
- One mobile repeater in the mobile emergency response unit;
- DEQ has boats for fish sampling purposes. Assessing shoreline and clean up needs. Majority of the boats are staged in the Portland area;
- Contract with NRC Environmental Services which has assets nationwide to draw from for personnel and equipment;
- Mobile emergency response unit – trailer equipped with generators, satellite communications, mobile repeater, computer and voice communications. Can run the trailer for a short period of time without supplemental fuels;
- Have a group of employees who hold HAM licenses. DEQ does not use HAM radio in any official way for response;
- Civil and chemical engineers, toxicologists and geologists on staff.

ESF 10. Oil and Hazardous Materials Response

Capabilities

- Coordinate with locals for information regarding damage assessment to hazardous materials holding/manufacturing facilities;
- Oregon Health Authority has the lead on drinking water safety and treatment, DEQ coordinates with local sewerage, and Oregon Health Authority on drinking water protection and infrastructure restoration;
- Issue variances and waivers to local governments for work on water and sewer systems for immediate response concerns;
- Provide technical assistance with nonhazardous waste management; including debris and recycling/reuse;
- Provide expertise on environmental and public health issues related to oil and hazardous material incidents;
- Provide expertise on environmental pollution control techniques;
- DEQ is a member of the Regional Response Team/Northwest Area Committee which publishes the regional oil and hazardous materials response plan, the NWACP, http://www.rrt10nwac.com/nwacp_document.htm. The NWACP serves as the State of Oregon Oil and Hazardous Materials Plan (State of Oregon Emergency Management Plan, Volume II, Part 3);
- MOU's with State parks to remove any oil or hazardous materials that make its way into the parks and scenic waterways;
- MOU with Coast Guard to respond in their zones to abate any oil or hazardous materials;
- MOU with California, Washington, British Columbia, Alaska, Hawaii for personnel and equipment to respond to oil spills;
- Provide assistance and information on decontamination procedures;
- DEQ may assist with hazardous materials clean up;
- DEQ also develops comprehensive plans and programs for air and water pollution control and solid and hazardous waste disposal;
- Coordinate with special teams (OSFM HAZMAT Teams, ODOT Incident Response Teams, USCG, EPA, local emergency responders and others);
- Contract with NRC Environmental Services which has assets nationwide to draw from for personnel and equipment;
- Health and safety staff and job safety contractor for DEQ emergency responders;
- Work with local governments for information regarding damage assessment to hazardous materials holding/manufacturing facilities;
- Have PIO's to interface with JIC and ECC.

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;
- Fuel concerns;
- Statewide DEQ communications would be affected by scenario;

ESF 10. Oil and Hazardous Materials Response

- Without fuel and communications primary ESF-10 priorities cannot be met;
- Facility operators will let DEQ know if they have a problem with regard to water/wastewater facilities. Unknown if these operators will be able to report issues.

Support Needed Immediately After A Catastrophic Event

- Would require immediate personnel assistance from outside of the State;
- Power;
- Fuel or transport to work locations;
- Equipment needs:
 - Several mobile labs;
 - Small boats for assessments;
 - Trucks and trailers to establish a storage area.
- Areas for staging equipment within the first 72 hours;
- Personnel responsible to bring their own PPE, replacement PPE for responders would be needed;
- Communications equipment.

3.1.2 Office of the State Fire Marshal

See ESF-4 for more OSFM CSZ information

Priorities

- Life and safety of responders and affected public;
- Coordination and direction of structural firefighting resources of the State through the organization of State and county fire defense boards and their respective mutual aid agreements;
- Search and rescue;
- Hazardous materials response;
- Mobilize available hazardous materials response teams;
- Identify areas with hazardous materials issues;
- Incident management;
- Responding to calls for OSFM for implementation of Conflagration Act.

Assets

- OSFM operates an Agency Response Center within the State ECC on an “as needed” basis.
- Three Incident Management Teams for coordination, which include certified safety officers;
- 13 HAZMAT trucks and personnel in the State – regionally deployed. Trucks include hand pumps which can be used to hand pump gas. HAZMAT Teams in Astoria and Coos Bay will be impacted by the event, and cannot be counted on;
- HAZMAT and SAR teams are trained to the national standard;

ESF 10. Oil and Hazardous Materials Response

- Decontamination capabilities;
- Incident safety officers;
- Have Statewide list of hazardous materials (107,000 files), MSDS for all of the hazardous material locations;
- List of 22,000 separate facilities that store or manufacture hazardous materials;
- All specialized responders are required to bring enough personal food and water for 72 hours;
- 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.

Capabilities

- Manages the State response to hazardous material spills;
- Identify, isolate and contain hazardous materials spills;
- Oversees the training, equipment and response activities of the State's 13 regional hazardous materials (HAZMAT) response teams;
- Direct the maintenance and use of the Statewide Fire Net/HAZMAT microwave relay radio system;
- Responsible for the duties of the State Emergency Response Commission under SARA Title III and Oregon statute. OSFM coordinates and oversees Local Emergency Planning Committees throughout Oregon;
- Ensure that parties responsible for the incidents are billed for the cost of mitigation and that the contracted teams are compensated for the allowable expenses;
- 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;
- Incident management;
- Direction and maintenance and use of the Statewide Fire Net/HAZMAT microwave relay radio system;
- OSFM operations can function without normal communication channels – phone, cell phone, and internet. If connectivity can be established with communications trailers they can proceed with response;
- Transportation of communication trailers to impacted areas;
- Providing local communications between responders and IMT's;
- Set up mobile communications and command centers with IMT's.

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;

ESF 10. Oil and Hazardous Materials Response

- 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 firefighting capabilities.

Support Needed Immediately After a Catastrophic Event

- EMAC HAZMAT teams and equipment, mobile interoperable communications, and base camps;
- Equipment and repair abilities to fulfill ESF-10 mission tasks;
- Fuel for generators and vehicles to include fuel for resources responding under the Conflagration Act;
- Roadway accessibility;
- Air resources to move equipment and personnel.

3.2 Support Agencies

3.2.1 Occupational Safety and Health Division

Oregon OSHA: Ensures employers understand their responsibilities for protecting their workers, especially during emergency response and recovery operations. Enforces occupational safety and health rules, investigates workplace fatalities, major accidents, and safety and health complaints. Coordinates and performs the actions identified within the Worker Safety & Health Support Annex of the National Response Framework, or State equivalent; provides occupational safety and health technical assistance to other State and local entities; assesses responder safety and health resource needs, e.g., OSHA on-site assistance, incident-specific personal protective equipment protocols, training, safety and health monitoring.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Respond to request to send liaison with State ECC.

Assets

- OR OSHA has field offices around State;
 - Location of field offices: Medford, Eugene, Salem, Bend, Portland, Pendleton.
 - Pendleton is a satellite office.
 - Oregon OSHA Laboratory is located in Portland.
- Vehicles for staff are located at each field office;
- Uses standard communication assets (phones, cell phones, internet);
- Uses the DCBS data network administered by DAS. DCBS/Oregon OSHA would be dependent on DAS for restoration of computer access;

ESF 10. Oil and Hazardous Materials Response

- Operates a nationally certified occupational health laboratory in Portland. This well-equipped lab analyzes samples collected by compliance officers and consultants to determine chemical compositions and concentrations of hazardous substances to which workers may be exposed.

Capabilities

- Oregon OSHA serves as a regulatory agency with Statewide authority over public and private sector operations and work for worker safety. Worker safety and health complaints would be addressed through established enforcement policies and procedures. If there is a worker safety and health issue, Oregon OSHA may be tasked with ensuring an employer takes care of the issue;
- Works with other State departments to answer questions on worker safety and health;
- Provides technical assistance (answering questions, distributing information, etc.) regarding worker safety and health;
- Education and training for responders and workers on dealing with safety and health hazards;
- Oregon OSHA can assist employers in complying with regulatory requirements for personal protective equipment;
- Liaises with Federal OSHA to ensure worker health and safety;
- Mechanisms are already in place to work with Federal OSHA in an earthquake scenario. In the context of disaster recovery, Federal OSHA will work with FEMA on the national level, assisting Oregon OSHA. This would go back through ECC for tracking ;
- Coordinates communication with labor unions, contractors, and other organizations regarding responder safety and health issues;
- Oregon OSHA has a large inventory of sampling equipment for a variety of substances and hazards, and staff trained on their use;
- Can coordinate with Federal OSHA to provide specialized response teams, for example, construction, biological or radiation safety. Access to and availability of Federal OSHA specialized response teams is contingent on federal/regional priorities.

Support Needed Immediately After a Catastrophic Event:

- By nature of a catastrophic event, 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;
- Electrical power backup for the Capital Mall buildings is serviced off the power grid, and OR-OSHA field offices do not have generators for emergency power backup;
- Oregon OSHA communications are dependent on telecommunications and internet;
- Loss of computer and data systems would impact Oregon OSHA operations significantly, however, enforcement citations could be issued through a manual process;
- Might require communication equipment and most likely vehicles, fuel or transport to work locations;

ESF 10. Oil and Hazardous Materials Response

- No private sector contractors that could help with Oregon OSHA regulatory work, which would be bulk of post-quake work;
- Would need to turn to Federal OSHA for assistance, if necessary.

3.2.2 Department of Energy

See ESF-12 for more DOE CSZ information

- Direct response actions for releases of hazardous materials from Oregon Department of Energy facilities and vehicles;
- Assist in identifying the source and extent of radioactive releases, and in the removal and disposal of those contaminants affected by radiological material;
- Provide additional informational assistance to Public Health and other medical services as needed.

3.2.3 Department of Fish and Wildlife

See ESF-11 for complete ODFW CSZ information.

Priorities

- Ensure safety of staff and facilities;
- Establish essential communications;
- Support response to HAZMAT events that affect fish and wildlife and their habitats;
- Coordinate ODFW assets and personnel for use in disaster response.

Assets

- Trucks capable of transporting large dead animals;
- Freezers (large and small).

Capabilities

- Concerned with, and responds to, oil and hazardous materials incidents and all other incidents that could degrade land or water to the point that fish or wildlife would be adversely affected, or their habitat degraded or destroyed. Under such circumstances, the agency is capable of assessing damage to natural resources;
- Ability to pick up and analyze dead wildlife;
- Freezer capabilities are typically located at the fish hatcheries.

Catastrophic Event Operational Challenges

- Need for immediate restoration of emergency communications;
- 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 assess HAZMAT incidents without aerial support or ability to access impacted areas;
- Access to ODFW facilities, due to damaged roadways and debris.
- Support Needed Immediately After a Catastrophic Event
- Damage assessment of coastal facilities capable of providing local support;

ESF 10. Oil and Hazardous Materials Response

- Generators for facilities;
- Fuels for equipment, vehicles, and generators;
- Transport of teams to/from impacted areas via air or sea if roadways are unavailable;
- Limited access and communication to facilities in coastal communities due to damaged infrastructure;
- Emergency communication established;
- Water purification capabilities.

3.2.4 Department of Forestry

See ESF-4 for complete ODF CSZ information

ODF is concerned with, and responds to, oil and hazardous materials incidents and all other incidents that could impact Oregon's timber and other forest values. Under such circumstances, the agency is capable of assessing damage to natural resources.

Priorities

- Life and safety of responders and the public;
- Ensure safety of personnel and facilities;
- Assessment of State forestry issues as a result of the incident;
- Coordination of forestry assets following incident.

Assets

- See ESF-4 for complete asset listing;
- Can provide subject matter experts and inspectors to assist with forest issues and ESF-10 response as needed.

Capabilities

- See ESF-4 for complete capabilities;
- Respond to and assess nature and responsibility of hazardous materials incidents;
- Provide logistical support for other State and local responders;
- Authority to assess responsibility and mandate clean-up activities by the responsible person(s) or agencies.

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;

ESF 10. Oil and Hazardous Materials Response

- Likely that insufficient resources will be available to respond.

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;
- Water;
- 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.

3.2.6 Oregon Health Authority

Lead State agency for all radiation emergencies except for those delegated to ODOE, and all human disease-related emergencies and drinking water emergencies.

See ESF-8 for complete OHA CSZ information.

Priorities

- Account for staff;
- Assess condition and safety of OHA-OPHD facilities and determine who can make it to work;
- Follow established procedures for staff safety and security;
- Available staff to report within 24 hours;
- Establish communications at surviving facilities;
- Establish situational awareness for ESF-10 issues;
- Determine how to coordinate with ECC being over 50 miles away (likely unable to send liaison, at least initially. Public Health provides common operating picture to ECC for ESF-8 issues and across all the ESFs where public health has a role);
- Determine availability of resources to support ESF-10 missions;
- Initiate immediate contact with HHS, FEMA Region X and CDC Operations Center to relay mission critical information to federal agencies.

Assets

- The primary office and agency operations center for the Oregon Public Health Division is located at 800 NE Oregon Street, Portland, OR 97232. Other Public Health facilities are located at:
 - Pendleton (two staff members);
 - Bend (two staff members);
 - Astoria (one staff member);
 - Eugene (two staff members);
 - Grants Pass (one staff member);

ESF 10. Oil and Hazardous Materials Response

- Roseburg (one staff member);
- Salem (one staff member);
- *No Public Health staff locations in tsunami zones.
- Alternate “West of the Willamette River” OPHD Agency Operations Center is at the Oregon State Public Health Laboratory at 3150 NW 229th, Hillsboro. The alternate “East of the Willamette River” OPHD Agency Operations Center site is ODOT office at 9200 SE Lawnfield Road in Clackamas. If infrastructure is passable, available staff to report within 24 hours as directed;
- Public Health can function virtually via the use of computer systems- (HOSCAP, HAN, OpsCenter, Web EOC, Inventory Request Management System (IRMS)) if those systems are up and running to gain some situational awareness and start operating at some level;
- Public Health staff east of the Cascades could take certain actions on command and control decisions – Strategic National Stockpile (SNS) and other issues (anticipated timeline is 24 hours for Eastern staff to be up and functioning);
- Staff located outside of Portland are equipped with satellite phones and Blackberries, laptops with wireless cards, plans stored on flash drives, etc.;
- Portable hard drives and access to GIS information, if systems are up and running;
- Public Health vehicles are equipped with 72-hour kits so staff driving them would be self-sufficient for a period of time without resources;
- Health Preparedness staff have preparedness type tools (all staff – 72 hour kits) because they are core to incident management team for ESF-8;
- HF and UHF radio capability;
- 180 satellite phones distributed by OPHD-HSPRP to Oregon partners and internal staff as follows:
 - Tribes: One (1) each distributed to each of 8 tribes (Total: 8)
 - Local Health Departments: Two (2) each to each of 33 LHDs; Three (3) each to one (1) LHD. (Total: 69)
 - Hospitals: One (1) each to each of 63 hospitals (Total: 63)
 - OHA and OPHD: One (1) each to each of 40 positions (Total: 40)
- Small caches of MCI supplies in ten trailers that are pre-deployed around the State – but those would provide limited resources for this type of scenario. Would likely not have what was needed, and would run out rapidly;
- Oregon Disaster Medical Team (ODMT): A volunteer group of 135 licensed health care providers and paraprofessional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide emergency medical care during a disaster or other event occurring in Oregon. OPHD and ODMT have signed a Memorandum of Understanding that allows this 501(c)(3) not-for profit to plan, train and provide relief healthcare services when local, county and mutual aid reserves are inadequate due to a mass casualty incident, disaster, or public health emergency.

ESF 10. Oil and Hazardous Materials Response

- Medical Reserve Corps (MRC) units are deployed locally and by Public Health. They can be part of State level response (MRCs have to preregister to help out State). MRC personnel register in SERV-OR;
- If a county calls up MRC, liability belongs to county MRCs are serving. State Public Health assumes liability if they mission task MRCs on State level;
- Storage for temperature controlled vaccines at Public Health facility in Portland.

Capabilities

The OHA programs involved in ESF-10 preparedness and response are:

Health Security Preparedness & Response Program (HSPRP) improves public health preparedness capacity by ensuring coordination among tribes, local, regional, State and Federal agencies and private health care partners before, during and after emergency events where the public's health is an issue.

Epidemiology and Surveillance Program is responsible for the identification, investigation, and prevention of diseases caused by infectious agents. This program conducts disease surveillance; collects and analyzes surveillance data; publishes public health recommendations; develops disease prevention, preparedness and response guidelines; and investigates and helps control disease outbreaks.

Acute and Communicable Disease Prevention Program provides epidemiologic and clinical expertise and guidance to the Incident Commander and develops guidance on disease related risks.

Public Health Laboratory serves as a level 3 bio-safety facility for biological clinical and unknown environmental sample testing (human chemical testing is provided by state public health labs in Alaska, Washington and Idaho).

- Provides biological confirmatory testing, and chemical specimen collection and specimen referral guidance to Oregon Sentinel Laboratory Response Network (LRN) laboratories;
- Works cooperatively with CDC;
- Manages the Oregon Laboratory Response Network that supports environmental and human testing of unknown biological and chemical threat agents;
- Provides confirmatory laboratory testing on human clinical specimens; and
- On implementation, OSPHL's Laboratory Information Management System (LIMS) allows:
 - Client health departments, laboratories and providers to submit laboratory requests directly;
 - Communications with clients through a dedicated messaging system;
 - Health officials to streamline the access and correlation of laboratory data throughout the State for outbreak investigation; and
 - Phase 2 (spring of 2012) will allow laboratory results to be directly input into Electronic Medical Record (EMR) systems.

ESF 10. Oil and Hazardous Materials Response

Emergency Medical Services (EMS) Section develops situational awareness of EMS resources; communicates with EMS providers; and coordinates realignment of EMS resources during a surge event. They coordinate Statewide trauma system planning, ambulance service area planning, and develops standards for ambulance personnel and emergency medical technicians.

Office of Environmental Public Health (OEPH) assures Statewide control of environmental hazards through drinking water protection, radiation protection, environmental toxicology and epidemiology programs and regulation of food, pool and lodging facilities.

- **Drinking Water Program** administers and enforces drinking water quality standards for public water systems. It provides guidance on prevention of and response to water system contamination.
- **Radiation Protective Service** provides radiation monitoring expertise and is the State's primary radiological response organization. It also provides radiation monitoring training to local government emergency response agencies.
- **Environmental Toxicology Section** protects the health and safety of the public from environmental hazards.

Public Health has responsibilities to support these **public health** response missions (Aligns with the 10 Essential Functions of Public Health):

Monitor health;	Enforce laws;
Diagnose and investigate;	Link to/provide care;
Inform, educate and empower;	Assure competent workforce;
Mobilize community partnership;	Evaluate
Develop policies;	Research.

- HSPRP , with the aid of the Local Health Departments, hospitals and health care systems, develops plans and procedures to prepare and respond to emergencies concerning the public's health;
- Coordinate logistical ESF 8 support by obtaining medical supplies; organize teams and personnel, etc. Support medical missions logistically for private and public sector. Maintain list of private sector medical suppliers;
- Receipt and distribution of the Strategic National Stockpile, coordination with ODOT for SNS movement;
- Strategic National Stockpile coordination and administration;
- Set up and management of the AOC;
- Provide trained personnel, and provide "just-in-time" training, as needed;
- Develop and coordinate external and internal communications in partnership with OHA communications, to include public messaging on incident status and mitigation measures;
- Coordinate requests for and deployment of public health resources;
- Provide technical assistance (guidance) on and establish mechanisms for tracking of financially-related information to support reimbursement requests from FEMA;

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- Assist in coordinating patient movement;
- Support agency in providing environmental health analysis side for clean water, food safety, and chemical spills;
- Ensure potability of water supplies;
- Manage continuity of public health operations;
- Public Health Authorities can be put into place to close facilities and quarantine people;
- Develop and implement demobilization plans;
- Develop incident after action reports (AARs);
- Provide Healthcare System Liaison communications:
 - To and from Regional Coordinators for clarification of issues/status of hospitals, EMS and other components of the regional healthcare system;
 - Obtain regional SITREPs to include specific information (e.g., employee absentee rates in hospitals);
- Mission assignments are made or requested of the following:
 - Oregon Disaster medical Team (ODMT);
 - National Disaster Medical Team (NDMS);
 - Federal Medical Station (FMS) – The AOC healthcare branch is involved in siting/staffing decisions;
 - Medical Reserve Corps (MRC) and SMVP deployment of volunteers;
- Can maintain and manage regional medical supply caches including -DECON; MCI; Incident command trailers; and satellite trailers;
- Oversees relocation of medical supply assets. The State has the ability to relocate Hospital Preparedness Program funded assets (e.g., generators, trailers, PPE, etc);
- Coordinate staffing of alternate care sites through SERV-OR and/or MRC, as requested;
- Assist in emergency credentialing SERV-OR and MRC volunteers;
- Assist the Office of Health Care Regulation & Quality Improvement in developing requests for Centers for Medicare & Medicaid Services (CMS) related bed identification to allow use of beds for purposes other than originally designated (Form 1135 Waiver);
- Emergency Medical Services (EMS): Maintain situational awareness of EMS assets and needs. Facilitate redeployment of these assets on a mission essential basis;
- Provide public messaging, outreach and guidance for public health issues;
- Facilitate development of crisis standards of care;
- Provide subject matter experts to advise local communities on health issues;
 - Epidemiologists
 - Physicians
 - Mass fatality technical specialists

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- Drinking Water
- Radiation Protection Services
- Toxicology
- Mass Care responsibilities for congregate care facilities

Post Event Activities:

- Conduct post-event surveillance of medical care systems;
- Collection of data on medical conditions;
- Post-event exposure registry rostering for hazardous material exposure;
- Testing for safety of drinking water and food;

Maintain the following web-based systems:

- Hospital Capacity Web Site (HOSCAP): this system is used in hospital emergency departments and participating EMS agencies to provide situational awareness in mass casualty incidents and other events. Provides Emergency Department (ED), trauma and inpatient bed availability and additional hospital capacity and logistics information;
- Health Alert Network (HAN) is part of the CDC National Health Alert Network System and is a key component of the Public Health Information Network (PHIN). HAN is used to convey consistent and timely health information to partners around the State. HAN has a document library available for routine, non-emergent collaboration within the public health system with local health departments, tribal, and hospital partners;
- SERV-OR: Volunteer registry for licensed health professionals;
- EM Track: A web-based system for tracking patients from an incident scene to admission to a hospital.

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;
- Logistics (SNS) movement and distribution is heavily reliant on transportation. MOU with ODOT for that, but may need to partner with State ECC to get a work-around if ODOT couldn't move it. Not sure how that would occur absent viable road infrastructure;
- Medical system overwhelmed and unable to provide care due to damaged facilities;
- Public Health has no transportation capabilities for this type of logistical movement and supply (agency only has a few motor pool cars, for the most part), nothing that could be used as backup transport for SNS;
- Isolated care locations would quickly run out of supplies;
- None of private sector health care has long-term capabilities if their normal day-to-day logistics is cut off. No back up warehouses or caches of supplies that would even come near what would be needed post-quake. System would run out of supplies, medications, hospital beds, providers – all across the board – immediately;

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- Some hospitals have warehouse storage for supplies, but they only have 24-72 hours of supplies under a “normal use” situation;
- Lack of interoperability (i.v. tubes, for example, are all different sizes and they all have very specific purposes for individual care). There are very few linkages between medical supplies, so that makes it harder on the providers and facilities because what they need for each patient is very specific;
- Regulations and Policies that could hinder response:
 - Legal issues for triaging doctors in this scenario are a problem. Many medical providers have become unwilling to serve during these types of disasters for this reason. Governor has authority by statute to waive certain rules;
 - No legal mechanism for public not wishing to be quarantined;
 - Challenge of prioritizing who is the priority for limited medical resources.

Support Needed Immediately After a Catastrophic Event

- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Security of SNS;
- Medical system overwhelmed and unable to provide care due to damaged facilities, will need resupply and additional personnel to manage, or will require mass patient transport to locations more able to deal with surge;
- Would be working with Federal counterparts to bring in Federal medical stations and other supplies (NDMS – National Disaster Medical System)- Example: 250-bed units of care to take loads off hospitals;
- Would require immediate Federal and out-of-State medical team assistance;
- D-MAT, D-VET (veterinary teams), D-MORT (Disaster Mortuary Teams);
- Additional supplies from SNS;
- American Medical Response (AMR) medical transport assistance;
- Providing supplies to isolated care locations;
- Logistical support;
- Public Health will work on rule modifications for patient transport with Emergency Medical Services (EMS) Ambulance Service Area (ASA) contract: Public Health would work on rule modifications for patient transport following scenario.

3.2.7 Oregon Emergency Management

See ESF-5 for more OEM CSZ information

- OEM Coordinates with local jurisdictions to develop and maintain city and county emergency operations plans.
- In accordance with ORS 466.635, OEM serves as the State’s 24-hour central reporting point for the notification of oil and hazardous materials spills and other emergency incidents.

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- Through the Oregon Emergency Response System (OERS), OEM provides local government and industry with a single point of contact to obtain the assistance of any State emergency response agency 24 hours a day, 7 days a week.
- Coordination and assignment of requests from county-level EOCs to assist local jurisdictions when additional resources are requested related to an oil or hazmat incident.

3.2.8 Oregon Military Department

See ESF-7 for more OMD CSZ information

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Recall of personnel;
- Identify fuel sources;
- The Oregon National Guard may engage in immediate response lifesaving response actions for up to 72 hours at individual unit commander's decision;
- Contact Additional CERFP and HRF assistance from outside of the State;
- 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

- CST (Civil Support Team) – (monitoring and identification of hazardous materials);
- CERFP Decontamination (mass decontamination);
- Approx. 3000 Tyvek suits stockpiled in State (set aside for Rapid Response Force).

Capabilities

- Mass Decontamination;
- Monitoring and identification of hazardous materials;
- Debris clearance;
- Outreach and early warning to public regarding hazardous materials;
- Evacuation assistance;
- Liaison with USCG and USN.

Catastrophic Event Operational Challenges

- Limited petroleum storage;
- 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.

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- Estimated that 72 hours after event 50% of personnel would be available for duty.
- Accessibility to fuel resources;
- National Guard doesn't respond to hazardous material spills, they treat people affected by them;
- Need for replacement personnel within three to five days.

Support Needed Immediately After a Catastrophic Event:

- Additional CERFP and HRF capabilities from outside of the State.

3.2.9 Department of State Lands

Priorities

- First priority is ensuring life and safety of DSL personnel and ensuring offices are safe for work;
- Provide liaison to State ECC;
- Provide assistance and permits as necessary for mitigation of hazardous materials spills on waterways and State property;
- Provide approvals for the use of State lands as necessary for response and recovery.

Assets

- Have three offices, Salem (80 on staff), Bend (10 staff) and South Slough, Coos Bay (15 staff);
- Natural resource specialists on staff;
- Have scientists on DSL Staff that are linked with the Pacific Tsunami Warning Center;
- Can provide GIS analysis and mapping capabilities. Three specialists that can assist as needed with GIS issues and information;
- Have a small fleet of vehicles in Salem - two 4WD vehicles, three sedans and one cargo van;
- Network of instruments in the South Slough that record water surface elevation and other water quality and meteorological parameters;
- Bend office has six 4WD vehicles;
- Have one boat located in Salem with trailer used to do surveys of property along navigable waterways and survey docks;
- DSL administrative office located in the town of Charleston (SE of Coos Bay on the South Slough);
- South Slough DSL office vehicles:
 - Two 4WD vehicles.
 - A one ton tilt bed equipped with tandem rear wheels and a bumper mounted winch (located at the SSNERR maintenance facility).
 - A half ton conventional pickup with four traction tires. (Located on the OIMB campus).
- We have about seven VHF radios with an assigned frequency;

ESF 10. Oil and Hazardous Materials Response

- Two twin axle utility trailers and a 14 hp 4WD diesel tractor equipped with a small front bucket and a 3 point trailer hitch and power takeoff. This is a smallish “landscape” tractor that fits on the trailers mentioned above.
- South Slough DSL office boats:
- Smokercraft 18 foot flat bottomed skiff with trailer and steering console, electric start 4 stroke 40 hp located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
- Alumaweld 16 foot semi vee hull with trailer and steering console, electric start 4 stroke 55 hp located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone).
- Valco 16 foot lightweight flat bottom “jon boat” with trailer and 20 hp pull start (location varies between OIMB and SSNERR Interpretive center).
- Valco 14 foot lightweight flat bottom “jon boat” without trailer and 15 hp pull start outboard.

Human powered craft including:

- 22’ fiberglass eight passenger canoe with trailer.
- Two or three conventional 17’ canoes (three passenger).
- Three or four Roto molded kayaks (single passenger).
- Trailer designed to carry four to six paddle craft.
- All human powered craft are located at the SSNERR Maintenance facility (outside of the tsunami inundation zone);
- Modified the water supply system at SSNERR’s interpretive center to store 2,000 gallons of potable water in two tanks and have another 1,000 gallon potable water storage tank at the Spruce ranch complex near the maintenance facility;
- DSL has access easement agreements with private property owners to gain access to State lands;
- Maintains a data base of all State owned lands.

Capabilities

- Coordinate with the Oregon DEQ when State lands and navigable waterways are affected by an oil and hazardous materials spill;
- Concerned with, and responds to, oil and hazardous materials incidents and all other incidents that could impact the four million acres of agricultural, grazing, forest, estuary, tidal, offshore, and submerged and submersible lands of the State’s navigable waterways including the territorial sea managed by DSL;
- Receives notification if State lands and navigable waterways are affected by an oil and hazardous materials spill;
- Provide removal fill permits for the cleanup process;
- Provides pre-event tsunami awareness training;
- DSL can provide information relevant to wetlands, State-owned forestland and easements that exist in Oregon, as well as other necessary information consistent with the mission of Department of State Lands;

ESF 10. Oil and Hazardous Materials Response

- Administers navigable waterways up to ordinary high water, coast areas – submerged and submersible lands up to three miles out;
- Through the State debris removal plan, tasked with providing State lands for stock piling debris;
- As manager of State owned properties, can use State property to establish staging areas;
- Issue rights of way and special use permits for agencies requiring access to damaged areas within State lands in Oregon;
- Can assist in the coordination of debris removal;
- Can implement emergency authorization process to allow for emergency removal of oil and hazardous materials from waterways without going through the permitting process;
- All staff can be moved to areas of need regardless of area office they are primarily assigned to;
- Staff can work virtually if offices are damaged and unsafe;
- DSL is a regulatory land management agency and would provide emergency authorization when and where needed;
- DSL has contracts for legal services, real estate services – appraisals, audit services, technical and natural resource services;
- Can provide some guidance with regard to emergency water treatment.

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;
- Accessibility to fuel resources;
- DSL does not have mobile operations capabilities. Staff can work from anywhere if there is power and communication connectivity;
- All communications depend on land line, cell phone, and computer e-mail capabilities;
- No capabilities to sustain a crew without a living area, food, water and power;
- Environmental laws that may hinder access to and through State owned lands and water ways.

Support Needed Immediately After a Catastrophic Event

- Fuel for vehicles;
- Getting staff where they need to be due to roadways being compromised;
- Need electricity/telecommunications/internet access for operational capabilities and access to computer databases necessary for operations.

ESF 10. Oil and Hazardous Materials Response

3.2.10 Oregon State Police

See ESF-13 for complete OSP CSZ information

Priorities

- Ensure safety of personnel and facilities;
- Ensure safety of public, property and natural resources in the State;
- Support State ESF-10 needs as directed by primary agency;
- Coordinate with primary agency for ESF-2 needs of OSP assets and abilities following incident;
- Secure Hazardous materials incidents involving State properties and highways;
- Assist in keeping highways and roads open primarily interstate and State highways, for evacuation, emergency response and commerce;
- If all communications capabilities are lost – Officers 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

- Some officers are issued APR's (air purifying respirators);
- Some officers are issued HAZMAT suits. However this PPE is not standard issue;
- Each OSP response area EOP has a section of identified critical facilities for that area.

Capabilities

- OSP is often first on-scene during an emergency. It may act as an initial incident command agency until the local incident command agency is on-scene or if no local agency is available;
- All OSP Officers are trained to a basic "Awareness Level" in HAZMAT response;
- Enables OSP responders ability to identify and report incidents for fire HAZMAT teams response;
- Officers are trained to identify, report and isolate incidents on State lands and roads;
- Provide safety perimeters and isolation zones for fire HAZMAT team(s) response.

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;
- Accessibility to fuel resources, current fuel resources may last for approximately four days;
- Coastal offices are unlikely to be functional; several coastal offices are located on docks which will be severely impacted by this event;
- Roadway damage will limit movement and impact a unified response;
- Radio and repeater sites are supplied with generator back-up power and will run out of fuel within 3 – 4 days without being recharged with fuel;

ESF 10. Oil and Hazardous Materials Response

- Employees with cars and capabilities throughout State may be isolated and unable to respond due to road / bridge damages;
- OSP vehicles are commercial fuel dependent – and dependent on electricity to access those fuel resources;
- OSP has limited resources and personnel in the State; may be challenging to meet demand for response services;
- Areas of Hwy 30 have many fuel storage tanks. Could be a huge problem if any of these tanks are damaged and leaking.

Support Needed Immediately Following a Catastrophic Event

- Fuel for continued OSP operations and maintaining facilities functioning under generator power;
- Support for fueling vehicles without electricity;
- Communications issues will need to be resolved.
- OSP doesn't have supply of food or water for personnel once personal supplies are expended.

3.2.11 Oregon Department of Transportation

See ESF-1 for complete ODOT CSZ information.

Priorities

- Life and safety of responders and affected public;
- Determine and deploy available ODOT resources available for ESF-10 response;
- Provide traffic control as needed in response to a hazardous materials incident on State highways;
- Provide highway maintenance workers and incident responders trained to the operations level for small amounts of operating fuels only (not cargo) for ESF-10 incidents on State highways.

Assets

- Can provide limited ESF-10 support with personnel who have basic training in hazardous materials;
- Have contact information for private sector companies capable of oil and HAZMAT clean up. Typically these companies are used to clean up a small spill that does not involve the State Fire Marshal's HAZMAT team response.

Capabilities

- Provide support that is regularly provided on a day to day basis;
- Provide traffic control support to reroute traffic or finding alternate routes;
- Provide a perimeter around a spill to protect citizens and responders;
- Establish evacuation zones at the direction of the State Fire Marshal.

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;

ESF 10. Oil and Hazardous Materials Response

- Personnel living and working in the impacted areas will be compromised by the event;
- Accessible and usable roadway networks;
- Due to the scale of this incident, existing ESF-10 response teams will be immediately overwhelmed and likely isolated.

Support Needed Immediately After a Catastrophic Event

- ESF-10 response trained teams and equipment from outside of the impacted area, mobile interoperable communications, and base camps;
- Equipment and repair abilities to fulfill ESF-10 mission tasks;
- Fuel for generators and responding vehicles/equipment;
- Roadway accessibility;
- Air resources to move 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
- PPE for responding personnel.

3.3 Adjunct Agency

3.3.1 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;

ESF 10. Oil and Hazardous Materials Response

- 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, which segments that 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.

4 ESF-10 Operations

4.1 Objective:

To provide for a coordinated response by State, local and federal resources to minimize the adverse effects on the population and the environment following the release of, or exposure to, hazardous material(s) following a catastrophic earthquake and resultant tsunami.

4.2 Challenges:

ESF 10. Oil and Hazardous Materials Response

- Limited ability to identify, assess and contain oil and HAZMAT releases due to loss of communications systems, limited transportation access, and insufficient numbers of trained responders;
- Limited ability to provide health and safety guidance to responders and the public based on the loss of communications systems;
- Survivors without adequate health and safety training and equipment will attempt response, potentially adding to casualties.

4.3 Assumptions:

- Damage to bulk chemical facilities will result in oil and hazardous material release;
- Fire, USAR, HAZMAT and EMS services have competing requirements during the response;
- Sewage spills and lack of fresh water will cause immediate health risks to public and first responders;
- Standard reporting mechanisms for hazardous spills will be unavailable;
- Exposure, disease vectors, and chemicals in debris will threaten displaced survivors.

4.4 ESF-10 Shortfalls and Requirements:

SHORTFALLS	REQUIREMENTS
Trained Personnel to respond to hazardous material spills/environmental health incidents.	▪ Additional environmental response teams. ▪ Additional hazmat response teams. ▪ National decontamination team ▪ Rapid assessment teams.
Personnel and equipment to provide public health and responder safety assessments.	▪ Personal protective equipment for responders and survivors in the impacted area. ▪ Air monitoring capability. ▪ Public messaging and communications.
Environmental Sampling, laboratory analysis and data interpretation.	Air, water, soil, debris and building surface sampling teams. Logistical support for transporting samples to laboratories throughout the country. Data management teams. Risk assessment teams.

ESF 10. Oil and Hazardous Materials Response

4.5 Concept of Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once ESF 10 has been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

DEQ and OSFM will provide a representative to the ECC who will be the primary points of contact for all ESF-10 needs.

ESF-10 functions include but are not limited to:

- The initial HAZMAT response will be a local effort with priorities set by local government;
- Establish communications with the affected local areas;
- ESF-10 agencies will provide technical support for HAZMAT cleanup and disposal immediately following an earthquake and resultant tsunami;
- As appropriate, coordinate with ESF #10 elements in non-impacted areas in State to obtain additional assistance;
- ESF-10 will maintain close coordination with State, federal and local officials to establish priorities for HAZMAT response support;
- Collect, analyze and determine the nature, amount, and locations of real or potential releases of HAZMAT, pathways to human and environmental exposure, probable direction and time of travel of the materials, potential impact to human health, welfare, safety, and the environment;
- Coordinate aerial assessment to assess obvious problems such as fires at industrial complexes and petroleum in rivers;
- ESF-10 will determine State resource deficits and request support.
- Validate resource shortfalls and coordinate federal response, EMAC requests, and additional contractor resources to assist in HAZMAT response;
- Coordinate with ESF -1 for the use of staging areas and air assets, provide protective action recommendations;
- Coordinate decontamination activities with appropriate local, State, and federal agencies;
- Coordinate with appropriate local, State, and federal agencies to ensure the proper disposal of wastes;
- Coordinate with ESF-3 for technical assistance on water, wastewater, solid waste, and disposal;
- Coordinate with ESF-12 for technical assistance on energy pipelines.

ESF 10. Oil and Hazardous Materials Response

5 Supporting Documents

- National Response Framework, ESF 10 – Oil and Hazardous Materials
- Oregon County ESF 10 Annexes
- Northwest Area Contingency Plan
- DEQ Emergency Operations Plan
- Business Continuity Plan (BCP) for Oregon Department of Environmental Quality

6 Appendices

Appendix 1 - US EPA Region 10 Emergency Response Program Info

TO ACTIVATE RESPONSE TEAM- CALL EPA DUTY OFFICER
1-206-553-1263

REPORT SPILLS TO NATIONAL RESPONSE CENTER
1-800-424-8802

EPA EMERGENCY RESPONSE AUTHORITIES	
NATIONAL CONTINGENCY PLAN (NCP)	NATIONAL RESPONSE FRAMEWORK (NRF)
US EPA or US Coast Guard lead response NCP is the codified (40 CFR 300) plan for response under the Superfund law and Oil Pollution Act (OPA) with Clean Air Act and Clean Water Act authorities Mandates an aggressive federal response without a disaster declaration Federal On-Scene Coordinator (OSC) has ultimate responsibility for oil and HazMat spills Federal OSC has access to all federal civilian and military resources through the Regional Response Team (RRT)	State or local lead response EPA to lead federal support of oil and hazardous materials response (ESF-10) Presidential disaster declaration required State must request support and FEMA must issue a mission assignment Federal OSCs retain authorities provided in the National Contingency Plan Provide Regional Emergency Operations Center and key ICS leadership positions for oil and HazMat response

ESF 10. Oil and Hazardous Materials Response

DISASTER RESPONSE CAPABILITIES	
15 OSCs, contractors and equipment staged throughout the region for quick response: - o Anchorage, AK o Boise, ID - o Coeur d’Alene, ID o Portland, OR - o Seattle, WA Special Team support: National Emergency Response Team (ERT) National Decontamination Team Regional Radiological Team Regional Water Infrastructure Response Team	Regional and mobile laboratories 147 Response Support Corps members, environmental staff with expertise: Sampling Inspection Lab Analysis Incident command OSCs, contractors, equipment and Response Support Corps resources can be mobilized from back-up regions (EPA Regions 8 and 9) or nationally

NATIONAL APPROACH TO RESPONSE (NAR)	
Set national EPA goal to be able to respond to five simultaneous incidents of national significance, <i>Getting to Five</i> Identified five of Department of Homeland Security’s (DHS) 15 planning scenarios where EPA would have a significant role: Biological Attack – Aerosolized Anthrax Chemical Attack – Blister Agent Natural Disaster – Major Earthquake Natural Disaster – Major Hurricane Radiological Attack – Radiological Dispersion Device	Developed response plans and gap analysis for each of the five scenarios Found that any single event would require national support Resource gaps will be inevitable when responding to multiple events Identified need to: Determine which (if any) scenarios are a priority for States Coordinate with States to identify additional priority scenarios Verify EPA assumptions on State resources

ESF 10. Oil and Hazardous Materials Response

EPA DISASTER RESPONSE MISSIONS	
Response to hazardous material releases and oil spills: - o Orphaned drum and container removal - o Household hazardous material collection Reconnaissance of critical infrastructure or facilities with hazardous materials	Contamination maps and transport models
Develop sampling plans and sample air, water, soil, debris, and building surfaces for chemical, biological or radiological contamination	Contaminated debris management
Drinking Water and Waste Water infrastructure assessment and support	Incident management
	Evidence collection
	Laboratory analysis of samples
	Data management
	Develop decontamination plans and oversee decontamination
	Worker safety monitoring

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Cascadia Subduction Zone Catastrophic Annex

ESF 11 – Agriculture and Natural Resources

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ESF 11. Agriculture and Natural Resources

ESF 11 Tasked Agencies	
Primary Agency	Oregon Department of Agriculture (ODA)
Supporting Agencies	Occupational Safety and Health Division (OHSD) Oregon Health Authority (OHA), Public Health Division (PHD) Oregon Military Department (OMD) Oregon Department of Fish and Wildlife (ODFW) Department of State Lands (DSL)
Adjunct Agency	American Red Cross (ARC)

1 Purpose

Support State, local and tribal authorities' efforts to address control and eradication of an outbreak of a highly contagious or economically devastating animal/zoonotic disease, highly infective exotic plant disease, or economically devastating plant pest infestation; and, assurance of food safety and food security prior to, during, and/or after a major disaster.

2 Scope

- Includes animal, plant disease, and pest response including implementing State, local and tribal response to an outbreak of a highly contagious or economically devastating animal/zoonotic disease, an outbreak of a highly infective exotic plant disease, or an economically devastating plant infestation.
- Ensures, in coordination with State ESF 8 that animal/veterinary/wildlife issues in natural disasters are supported.
- Assures the safety and security of the commercial food supply, including the inspection and verification of food safety aspects of slaughter and processing plants products in distribution and retail sites, laboratory analysis of food samples, control of products suspected to be adulterated, plant closures, and field investigation.

3 Roles and Responsibilities

3.1 Primary Agency

3.1.2 Department of Agriculture

The mission of the ODA is 1) to ensure food safety and provide consumer protection; 2) to protect the natural resource base for present and future generations of farmers and ranchers, and 3) to promote economic development and expand market opportunities for Oregon agricultural products.

The **Animal Health and Identification Division** provide veterinarian services to control and eradicate animal diseases, especially those transmissible to humans, livestock and birds. The Division provides guidance and assistance to local jurisdictions for response to disasters that involve domestic animals.

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Priorities

- Damage assessment and staffing of the agency AOC;
- Establish essential communications;
- Response to distressed animals and/or diseases effecting domestic animals.

Assets

- Agency has own AOC for emergency operations however will send a liaison to the ECC;
- State staff of three veterinarians;
- Field Staff – approximately 240 (some of this number is seasonal) – brand inspectors who document testing that is done on domestic animals so that they can be shipped in and out of State to sustain quality control and commerce capability;
- Team 125 – 150 (variable number) of private veterinarians that have been credentialed and trained in ICS response activities that can be called upon to assist the State. These team members are under contract with the Department of Agriculture;
- Have four animal response trailers located throughout the State;
- Have two livestock trailers capable of hauling mobile corrals;
- Have MOU's with veterinarians to augment ODA response Statewide;
- Coordinates with USDA AFIS Veterinary Service;
- OSU will provide responders for disease control (students).
- Have livestock sheltering areas east of the Cascades. Have data to be able to establish alternate private livestock sheltering capabilities.

Capabilities

- Testing and movement of domestic animals to areas of the State/out-of-State able to care for displaced livestock;
- Re-establish commerce capabilities and regulatory standards;
- Monitor safety and environmental health of Confined Animal Feeding Operations (CAFO);
- Assist with coordination, control and eradication of outbreak of highly contagious disease that affects humans;
- Assure food safety and security in coordination with other agencies, as appropriate;
- Able to telework throughout the State if need be;
- Can sustain basic operations for three to four days with current staff;
- Coordinate for the disposal of animal carcasses;
- Assist with pet sheltering.

Catastrophic Event Operational Challenges

- Two thirds of the available staff is located west of the Cascades. This scenario may impact their ability to respond;
- Main Department of Agriculture building in Salem will need generator power;
- Determining disposal sites for dead animals;

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- Currently have no radio communications capabilities;
- No amateur radio capability.

Support Needed Immediately After a Catastrophic Event

- Two thirds of the available staff is located west of the Cascades. This scenario may impact their ability to respond;
- Request veterinarians from out of State who would help manage incident response;
- Will require assistance of Federal Veterinarian Response Teams or additional;
- Field teams will require fuel and road access to areas as needed;
- Main Department of Agriculture building in Salem will need generator power;
- Potable water;
- Currently have no radio communications capabilities;
- No amateur radio capability;
- ODA will need fuel for animal carcass disposal, and disposal of contaminated feed. (Burning)

The **Food Safety Division's** team of field inspectors and staff license and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption. This includes shellfish harvesting, dairy, retail grocers, bakeries, non-alcoholic beverages, custom meat, eggs, warehouses and food manufacturing. ODA coordinates with the State Health Officer on milk and other food products in commerce in response to nuclear incidents and works closely with the Oregon PHD in response to all food emergencies.

Priorities

- Human health is primary priority;
- Animal health is secondary priority;
- Water testing of private wells being used as a water source for industrial food processing.

Assets

- Have resources to assist county and State Health Departments with food safety issues;
- Have Statewide contact list for food producers and licenses.

Capabilities

- License - food processors, warehouses, grocery stores, delis, bottled water, milk producers, dairies;
- Inspect all facilities once a year and more often if necessary;
- Contract with FDA for inspections;
- Investigate food safety issues – and recalls;
- Responsible for activating FERN – Food Emergency Response Network and CCAP – Chemistry Cooperative Agreement Program;

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- Provide expertise in determining the safety of sundry food supplies from grocery stores that are not perishable or contaminated to augment sheltering food needs.

Support Needed Immediately After a Catastrophic Event

- Will not have the capability of testing and verifying the safe handling of food being brought into impacted areas for human or animal consumption;
- Quality assurance of food will have to be done prior to being used in the State.
- 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.
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Additional food inspectors will be needed to ensure food safety;
- Communications capabilities for ODA will need to be improved to communicate post-incident.

Laboratory facilities provides analysis for food and dairy samples, animal diseases, animal feeds, shellfish, fertilizer, water, plant pest and disease, pesticides, and market assurance analysis. Analyses are also provided for the Food Emergency Response Network (FERN).

Assets

- Animal lab in Salem for inspection and testing prior to shipping in and out of State;
- Portland Animal lab is located on the Naito Parkway, Portland.

Capabilities

- Can test Oregon food products destined for overseas shipments;
- Can assist the Department of Health with testing drinking water resources, as needed.

The **Natural Resources Division's** mission is to conserve, protect, and develop natural resources on public and private lands. Primary program areas include: water quality, confined animal feeding operations, smoke management, land use, and Soil and Water Conservation Districts.

Capabilities

- Can assist county Health Departments with water testing;
- Can provide technical expertise in long term recovery of Agricultural production and conserving natural resources.

The **Pesticides Division** regulates the sale and use of pesticides, provides testing and licensing for all users of restricted-use pesticides, is responsible for fertilizer registration, and investigates incidents of pesticide misuse. Its Pesticide Analytical and Response Center (PARC) functions as a clearinghouse for information on alleged and actual health and environmental incidents and reports its findings. ODA investigates these incidents and reports its findings.

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Assets

- Has licensing information of pesticide applicators.

Capabilities

- Can assist in sampling and ensuring safety of water supply;
- Coordinates with DEQ on providing pesticide information.

The **Plant Division** works to exclude, detect, and control or eradicate serious insect pests and plant diseases.

- Can provide support to public health matters for radiological incidents consistent with the Advisory Team for environment, food and health.

The **Food Safety Division's** team of field inspectors and staff license and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption.

Capabilities

- Field staff with expertise to assist local and State health departments with food inspections for safe distribution and consumption;
- Assist State and local public health departments as necessary;
- Will need additional field staff from out of State with qualifications.

Support Needed Immediately After a Catastrophic Event

- Will not have the capability of testing and verifying the safe handling of food being brought into impacted areas for human or animal consumption;
- Quality assurance of food will have to be done prior to being used in the State;
- 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;
- Accessibility to fuel resources;
- Aerial (fixed wing and rotor) support for medical evacuation and insertion of teams;
- Additional food inspectors will be needed to ensure food safety;
- Communications capabilities for ODA will need to be improved to communicate post-incident.

3.2 Supporting Agencies

3.3 3.2.1 Occupational Safety and Health Division

Oregon OSHA: Ensures employers understand their responsibilities for protecting their workers, especially during emergency response and recovery operations. Enforces occupational safety and health rules, investigates workplace fatalities, major accidents, and safety and health complaints. Coordinates and performs the actions identified within the Worker Safety & Health Support Annex of the National Response Framework, or State equivalent; provides occupational safety and health technical assistance to other State and local entities; assesses responder safety and health resource needs, e.g.,

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OSHA on-site assistance, incident-specific personal protective equipment protocols, training, safety and health monitoring.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Respond to request to send liaison with State ECC.

Assets

- OR OSHA has field offices around State.
- Location of field offices: Medford, Eugene, Salem, Bend, Portland, Pendleton.
- Pendleton is a satellite office.
- Oregon OSHA Laboratory is located in Portland.
- Vehicles for staff are located at each field office;
- Uses standard communication assets (phones, cell phones, internet);
- Uses the DCBS data network administered by DAS. DCBS/Oregon OSHA would be dependent on DAS for restoration of computer access;
- Operates a nationally certified occupational health laboratory in Portland. This well-equipped lab analyzes samples collected by compliance officers and consultants to determine chemical compositions and concentrations of hazardous substances to which workers may be exposed.

Capabilities

- Oregon OSHA serves as a regulatory agency with Statewide authority over public and private sector operations and work for worker safety. Worker safety and health complaints would be addressed through established enforcement policies and procedures. If there is a worker safety & health issue, Oregon OSHA may be tasked with ensuring an employer takes care of the issue;
- Works with other State departments to answer questions on worker safety and health;
- Provides technical assistance (answering questions, distributing information, etc.) regarding worker safety and health;
- Education and training for responders and workers on dealing with safety and health hazards;
- Oregon OSHA can assist employers in complying with regulatory requirements for personal protective equipment;
- Liaises with Federal OSHA to ensure worker health and safety;
- Mechanisms are already in place to work with Federal OSHA in an earthquake scenario. In the context of disaster recovery, Federal OSHA will work with FEMA on the national level, assisting Oregon OSHA. This would go back through ECC for tracking;
- Coordinates communication with labor unions, contractors, and other organizations regarding responder safety and health issues;

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- Oregon OSHA has a large inventory of sampling equipment for a variety of substances and hazards, and staff trained on their use;
- Can coordinate with Federal OSHA to provide specialized response teams, for example, construction, biological or radiation safety. Access to and availability of Federal OSHA specialized response teams is contingent on federal/regional priorities.

Support Needed Immediately After a Catastrophic Event:

- By nature of a catastrophic event, 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;
- Electrical power backup for the Capital Mall buildings is serviced off the power grid, and OR-OSHA field offices do not have generators for emergency power backup;
- Oregon OSHA communications are dependent on telecommunications and internet;
- Loss of computer and data systems would impact Oregon OSHA operations significantly; however, enforcement citations could be issued through a manual process;
- Might require communication equipment and most likely vehicles, fuel or transport to work locations;
- No private sector contractors that could help with Oregon OSHA regulatory work, which would be bulk of post-quake work;
- Would need to turn to Federal OSHA for assistance, if necessary.

3.2.2 Oregon Health Authority (OHA), Public Health Division (PHD)

See ESF-8 for complete OHA CSZ information

- Determine which foods are fit for human consumption and identify potential problems associated with contaminated foods;
- Provide for laboratory and diagnostic support, subject matter expertise and technical assistance to assist in product tracing, inspection and monitoring;
- Assist in surveillance for foodborne disease and occupational safety and health issues.

3.2.4 Oregon Military Department

See ESF-7 for complete OMD CSZ information

- Provide support assistance as tasked;
- Has equipment and personnel to assist with physical labor of animal disposal;
- Civil Support Team (CST) has mobile laboratory facilities that could support biologic and food safety surveillance;

3.2.5 Oregon Department of Fish and Wildlife

Priorities

- Ensure safety of staff and facilities;
- Establish essential communications;
- Coordinate ODFW assets and personnel for use in disaster response.

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Assets

- ODFW Statewide facilities:



- Northwest Region Liberation Trucks (Mobile Water Tanks);
 - Approximately 20 Liberation Trucks
 - Approximately 4 Portable Tanks
- Southwest Region Liberation Trucks (Mobile Water Tanks);
 - Approximately 7 Liberation Trucks
 - Approximately 11 Slip Tanks
 - 1 Fire Suppression Trailer

- Northwest Regional Hatchery – freezer assignment:

Bonneville Hatchery	Willamette Hatchery	Willamette / Dexter Hatchery	Sandy Hatchery
Clackamas Hatchery	Clackamas Fish ID	Clackamas Regional Office	Lookingglass Hatchery

- Southwest Regional Hatchery – freezer assignment:

Newport	Roseburg Regional Office	Nehalem	Cole Rivers / Central Point

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- Nine civil engineers (two being structural engineers) at Salem Headquarters;
- Regional heavy equipment resources to help public interest:
 - Submersible pumps;
 - Backhoe / loaders;
 - Chain saws;
 - ATV's;
 - Tractors, pin on buckets, loaders, front end loaders;
 - Trailers – all sizes;
 - Variety of trucks – 4x4, 4WD, 2WD;
 - Winches, winch dozers;
 - Air compressors;
 - Portable generators;
 - Mobile Radios, roof radio antennas, hand held radios;
 - Portable toilets;
 - 286 boats of various sizes and capabilities – at ODFW facilities Statewide;
 - Responding staff can be prepared to sustain themselves for 72 hours when deployed.

Fish hatchery assets are predominantly out of the tsunami inundation zone. However, many will most likely sustain damage from earthquake.

Capabilities

- Serve as the point of contact for any zoonotic diseases involving wildlife;
- Assist in responding to a highly contagious/zoonotic disease or other emergency involving wildlife;
- Water transportation capabilities from Northwest Regional Hatcheries – 37,400 gallons of water;
- Water transportation capabilities from Southwest Regional Hatcheries – 13,800 gallons of water;
- Provide assistance to ODOT, county, and local public works agencies for debris removal and road maintenance;
- Provision of available freezer capacity at regional hatcheries for uses other than mass fatality;
- Provide freezer / cold storage for mass fatality incidents;
- Participate in the Oregon Health Services – Drinking Water Program:
- Drinking Water guidelines – hauling water for drinking purposes is not regulated in the State of Oregon. The mission of the Drinking Water Program is to assure all Oregonians safe drinking water. These guidelines have been developed by the

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Drinking Water Program to help provide the “hauler” an effective means to ensure the delivery of safe drinking water.

- Provide Mobile Water Tanks and Mobile Food Establishment Water Tanks as needed. Mobile Water Tanks shall be:
- Safe;
- Durable, corrosion-resistant and nonabsorbent; and
- Finished to have a smooth, easily cleanable surface in order to meet all safety standards to haul food grade potable water.

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;
- Limited access to resources in coastal communities due to damaged infrastructure;
- Need for immediate restoration of emergency communications;
- Ability to provide delivery of potable water to coastal areas is diminished due to likely damage to roadways and bridges;
- Access to potable water is necessary for use of liberation trucks for water delivery;
- ODFW does not have water purification capabilities;
- Power is required to run all freezers. Some hatcheries have generator power. However, will only have short term capabilities without fuels.

Support Needed Immediately After a Catastrophic Event:

- Damage assessment of coastal facilities capable of providing local support;
- Generators for facilities;
- Fuels for equipment, vehicles, and generators;
- Transport of teams to/from impacted areas via air or sea if roadways are unavailable;
- Limited access and communication to facilities in coastal communities due to damaged infrastructure;
- Emergency communication established;
- Water purification capabilities.

3.2.6 Department of State Lands

Priorities

- First priority is ensuring life and safety of DSL personnel and ensuring offices are safe for work;
- Provide liaison to State ECC;
- Provide approvals for the use of State lands as necessary for response and recovery.

Assets

- Have three offices, Salem (80 on staff), Bend (10 staff) and South Slough, Coos Bay (15 staff);
- Natural resource specialists on staff;

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- Have scientists on DSL Staff that are linked with the Pacific Tsunami Warning Center;
- Can provide GIS analysis and mapping capabilities. Three specialists that can assist as needed with GIS issues and information;
- Have a small fleet of vehicles in Salem - two 4WD vehicles, three sedans and one cargo van;
- Network of instruments in the South Slough that record water surface elevation and other water quality and meteorological parameters;
- Bend office has six 4WD vehicles;
- Have one boat located in Salem with trailer used to do surveys of property along navigable waterways and survey docks;
- DSL administrative office located in the town of Charleston (SE of Coos Bay on the South Slough);
- South Slough DSL office vehicles:
 - Two 4WD vehicles
 - A one ton tilt bed equipped with tandem rear wheels and a bumper mounted winch (located at the SSNERR maintenance facility)
 - A half ton conventional pickup with four traction tires. (Located on the OIMB campus)
- We have about seven VHF radios with an assigned frequency;
- Two twin axle utility trailers and a 14 hp 4WD diesel tractor equipped with a small front bucket and a 3 point trailer hitch and power takeoff. This is a smallish “landscape” tractor that fits on the trailers mentioned above.
- South Slough DSL office boats:
 - Smokercraft 18 foot flat bottomed skiff with trailer and steering console, electric start 4 stroke 40 hp located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone)
 - Alumaweld 16 foot semi vee hull with trailer and steering console. Electric start 4 stroke 55 hp located on the Oregon Institute of Marine Biology campus in Charleston (in tsunami inundation zone)
 - Valco 16 foot lightweight flat bottom “jon boat” with trailer and 20 hp pull start (location varies between OIMB and SSNERR Interpretive center)
 - Valco 14 foot lightweight flat bottom “jon boat” without trailer and 15 hp pull start outboard

Human powered craft including:

- 22’ fiberglass eight passenger canoe with trailer
- Two or three conventional 17’ canoes (three passenger)
- Three or four Roto molded kayaks. (single passenger)
- Trailer designed to carry four to six paddle craft

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- All human powered craft are located at the SSNERR Maintenance facility (outside of the tsunami inundation zone)
- Modified the water supply system at SSNERR's interpretive center to store 2,000 gallons of potable water in two tanks and have another 1,000 gallon potable water storage tank at the Spruce ranch complex near the maintenance facility;
- DSL has access easement agreements with private property owners to gain access to State lands;
- Maintains a data base of all State owned lands.

Capabilities

- Coordinate with the Department of Agriculture regarding those activities relevant to DSL's responsibilities (access, special permits, et cetera).
- DSL can provide information relevant to wetlands, State-owned forestland and easements that exist in Oregon, as well as other necessary information consistent with the mission of Department of State Lands;
- Administers navigable waterways up to ordinary high water, coast areas – submerged and submersible lands up to three miles out;
- Provides pre-event tsunami awareness training;
- Manages State owned range land and forest lands for income;
- Forest land is managed by the Department of Forestry and timber sales are used to fund education;
- Through the State debris removal plan, tasked with providing State lands for stock piling debris;
- As manager of State owned properties, can use State property to establish staging areas;
- Issue rights of way and special use permits for the Army Corps of Engineers, ODOT and other agencies that require access to damaged areas within State lands in Oregon;
- Can assist in the coordination of debris removal;
- Can implement emergency authorization process to allow for emergency removal of debris from waterways without going through the permitting process;
- All staff can be moved to areas of need regardless of area office they are primarily assigned to;
- Staff can work virtually if offices are damaged and unsafe;
- DSL is a regulatory – land management agency and would provide emergency authorization when and where needed;
- DSL has contracts for legal services, real estate services – appraisals, audit services, technical and natural resource services.

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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- Accessibility to fuel resources;
- DSL does not have mobile operations capabilities. Staff can work from anywhere if there is power and communication connectivity;
- All communications depend on land line, cell phone, and computer e-mail capabilities;
- No capabilities to sustain a crew without a living area, food, water and power;
- Environmental laws that may hinder access to and through State owned lands and water ways.

Support Needed Immediately After a Catastrophic Event:

- Fuel for vehicles;
- Getting staff where they need to be due to roadways being compromised;
- Need electricity/telecommunications/internet access for operational capabilities and access to computer databases necessary for operations.

3.3 Adjunct Agency

3.3.1 American Red Cross

See ESF-6 and ESF-8 for more ARC CSZ information

- Upon request, assist in establishing, coordinating, and managing the State's sheltering missions to include supporting medical and mental health needs;
- Provides emergency first aid, consisting of basic first aid and referral to appropriate medical personnel and facilities, supportive counseling, and health care for minor illnesses and injuries to incident victims in mass care shelters, the JFO, selected incident cleanup areas, and other sites deemed necessary by the primary agency;
- Provides supportive counseling for family members of the dead, for the injured, and for others affected by the incident;
- Acquaints families with available health resources and services, and makes appropriate referrals;
- Refers all concerns regarding animal health care, safety, or welfare to American Veterinary Medical Association contact(s) in the disaster area. These contact people are veterinarians affiliated with national, State, county, or local veterinary associations;
- Support emergency medical needs on site.

4 ESF-11 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Agriculture and Natural Resources assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

The ODA responds to requests for assistance by coordinating aid to those affected jurisdictions who have reported animal evacuation and sheltering needs, highly contagious or economically devastating animal or zoonotic disease, or any known

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outbreak of economically devastating plant pest or disease. During ECC activation or State emergency declaration ODA, in coordination with the State ECC, deploy personnel and supplies appropriate to any situation where the above referenced issues require assistance.

4.1 Objective

ESF-11 objectives include:

- Coordinate veterinary medical care, sheltering, and carcass disposal of animals following an earthquake;
- Assure of the safety and security of the commercial food supply through inspection and verification of food safety;
- Organize the protection of Oregon natural resources by formalizing appropriate response actions to conserve, rehabilitate, recover and restore sensitive ecological areas.

4.2 Challenges

- Rescue of animals is unlikely to be a high priority of responders dealing with multiple incidents directly threatening human lives;
- Many animal owners will resist assistance and sheltering if it means leaving their pets;
- Agriculture accounts for 15% of the Oregon economy; this scenario would have a huge impact on the economic health of the State.

4.3 Assumptions

Following a strong earthquake, there will be damage to barns, fences, and other enclosures that may lead to the release of animals that subsequently roam about unrestricted, endangering the health and safety of humans. There will also be losses to animal and crop-related businesses in affected areas.

Since an estimated 60% of households have pets, it is likely that many animals will require veterinary care and sheltering when these homeowners become displaced in the earthquake. In addition to pets, service animals as well as a large number of horses and other livestock in the area will be affected, both by injury and by food/water deprivation. Therefore the State should expect a large number of animals requiring care and sheltering.

The earthquake and resultant tsunami may lead to the deaths of large numbers of animals which will necessitate the use of safe and efficient methods of animal carcass movement and disposal.

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4.4 ESF-11 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Trained Personnel to respond to agricultural, animal and natural resource issues.	- Environmental Response Teams. - Rapid Assessment Teams. - Pet shelter staff and veterinarians.
Ability to evacuate and shelter pets and livestock	- Pre-established pet sheltering agreements. - Policies for location of pet shelters near human shelters. - Established protocols and priorities to deal with animals and owners that are a threat to their own or others' safety. - Pre-existing locations and policies for livestock sheltering and/or evacuation. - Public messaging and communications regarding animal issues. - Pre-established plans for feeding of pets and livestock following disaster.
Food and water safety sampling, laboratory analysis and data interpretation	- Air, water, soil, and food safety sampling teams. - Ability and staff to monitor food coming into State following disaster. - Ability and staff to ensure safety of Oregon agricultural products.

4.5 Concept of Operations

ESF-11 functions include but are not limited to:

- Communications with recognized animal health care providers, and agencies;
- Coordination of multi-State event response and recovery with local, State, and federal animal response agencies;
- Develop a list of resources available within and outside the State to conduct animal-agriculture response and recovery activities;
- Develop plans to use in impacted areas to conduct animal-agriculture response and recovery activities;
- Assistance may be needed for such issues as the
 - Search, capture, transportation and sheltering/pasturing/stabling of animals in and outside of the impacted areas;
 - Providing veterinary care for injured and/or diseased animals;
 - Providing supplies for and the monitoring/tracking of shelter activities;
 - Ensuring a safe supply of agricultural products;
 - Providing support for management of native wildlife animal species.
- Coordinate with ESF-7 and ESF-6 on relevant donated supplies;
- Implement procedures to obtain and coordinate resources to respond to requests for assistance concerning animal carcass disposal, and animal- and agriculture-related public health concerns.

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- Develop public information to assist the public regarding animal and agricultural issues following an earthquake;
- Implement procedures to obtain and coordinate resources to respond to requests for assistance regarding animal-agriculture issues following an earthquake. This includes requesting assistance (veterinary and related resources) from outside the State, if needed;
- Assist with damage assessment of agricultural facilities and submission of damage assessment information to appropriate parties;
- Coordinate with USDA and other Federal agencies, as needed, on all response and recovery issues.

5 Supporting Documents

- National Response Framework, ESF 11 – Agriculture and Natural Resources
- County ESF 11 Annexes

Animal Health and Identification Division

- Avian Influenza Surveillance and Response Plan (November 2006)
- Animal Disaster Response Plan (March 2007)
- Oregon Animal Disease Emergency Management Plan (June 2007)

Food Safety Division

- Food Emergency Response Plan (Draft)
- Food Emergency Response Network (FERN)

Plant Division

- Plant Division Emergency Response Plan (August 2006)
- MOU ODA/USDA – Provide Cooperation to Protect Agricultural, Horticultural, Timber and Natural Plant Resources from Losses Caused by Plant Pests or Noxious Weeds

Oregon Department of Agriculture

- Continuity of Operations Plan (2007 Draft)
- State of Oregon Animals in Disaster Plan

12

Cascadia Subduction Zone Catastrophic Annex

ESF 12 – Energy

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ESF 12 Tasked Agencies	
Primary Agencies	Oregon Department of Energy (ODOE) Public Utility Commission (PUC)
Supporting Agencies	Department of Administrative Services (DAS) Department of Human Services (DHS) Oregon Military Department (OMD) Oregon Department of Transportation (ODOT) Oregon State Police (OSP)
Adjunct Agencies	

1 Purpose

- Facilitate restoration of damaged energy systems and components during a potential or actual emergency or major disaster.
- Manage State response to emergencies involving radioactive materials releases from fixed nuclear facilities (Hanford), commercial nuclear power plants (Columbia Generating Station and the Trojan Independent Spent Fuel Storage Installation), and research reactors (Oregon State University and Reed College).
- Manage State response to transportation accidents involving radioactive material shipments on Oregon highways.
- Manage State response to emergencies involving the severe or long-term shortage or disruption of petroleum products. This includes implementing the Statewide fuel allocation program when appropriate.
- Manage State response to emergencies involving the transportation, transmission and distribution of Liquefied Natural Gas (LNG).

2 Scope

Gathers, assesses, and shares information on energy system damage and estimations of the impact of energy system outages within affected areas. Determine issues and implements appropriate protective actions to ensure the protection of public health and safety during energy emergencies. Works closely with, and aids in, meeting requests for assistance from local officials, energy industry suppliers and distributors. Within ESF 12, energy includes producing, refining, transporting, generating, transmitting, conserving, building, distributing and maintaining energy systems and system components.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Department of Administrative Services

See ESF-7 for additional CSZ information

DAS provides restorative services including structural, HVAC and electrical systems within State-owned facilities during or after an incident in the State of Oregon which requires a coordinated response.

3.1.2 Department of Energy

The Oregon Department of Energy (ODOE) is responsible for planning, preparedness, response, and recovery from petroleum disruptions (ORS 176), liquefied natural gas (LNG) mishaps (496), and radiological emergencies (496).

Priorities

- First priority is ensuring life and safety of personnel and ensuring offices are safe for work;
- Activate Agency Emergency Operations Center;
- Provide liaison to State ECC when activated;
- Rapid assessment of fuel, LNG, and radiological impacts in the State following the event.

Petroleum Program:

- Immediate assessment of fuel storage facilities and delivery systems – Statewide.
- If needed, activate the Oregon Petroleum Contingency Plan to direct the State's overall response to fuel emergencies with potential impacts to Oregon. This includes providing emergency notifications, assessing impacts and issuing fuel conservation measures to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.
- If needed, activate a Statewide fuel allocation program prioritizing fuel requests to provide resources to:

Tier 1 – Emergency Services Sector – county emergency management agencies and organizations performing lifesaving functions;

- Law Enforcement
- Fire Service / Search & Rescue
- Medical Services (Ambulance, Air Transport, Hospitals)

ODOE will work with and rely on the expertise and assessments of each county emergency management agency to determine fuel needs for their respective jurisdictions.

Tier 2 – Essential Services Sector – State agencies and organizations supporting local response efforts and performing critical functions to restore Oregon's fuel supply and distribution system and other critical infrastructure. Tier 2 involves the State's Emergency Support Functions (ESFs) 1-13;

- ODOE will work with and rely on the expertise and assessments of each ESF lead State agency to determine fuel needs for their respective sector(s).

Tier 3 –Community Hardship - Cities and Counties experiencing hardships caused by fuel shortages;

- Emergency fuel requests from communities will be reviewed by ODOE on a case-by-case basis. Approval will depend on fuel availability and event conditions.

LNG Program:

- Immediate assessment of LNG terminal and LNG waterway transit corridor – Coos County
- Immediate assessment of pipeline systems transferring product to market – Douglas County, Jackson County, and Klamath County
- If needed, activate the Oregon State LNG Emergency Response Plan to direct the State's overall response to LNG emergencies impacting Oregon. This includes providing emergency notifications, assessing impacts and issuing protective actions to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.

Radiological Program:

- Immediate assessment of fixed nuclear facilities and eastern Oregon communities within 50 miles of the Hanford Nuclear Reservation in southeastern Washington – Morrow and Umatilla counties.
- Immediate assessment of radioactive material shipments on Oregon highways.
- If needed, activate Oregon's Nuclear Emergency Response Plan to direct the State's overall response to radiological emergencies impacting Oregon. This includes providing emergency notifications, assessing impacts and issuing protective actions to the public, and addressing public concerns and disseminating news releases and other event information as appropriate.

Assets

- ODOE operates an agency Emergency Operations Center (EOC) in Salem. The agency EOC serves as the statewide coordination point for ODOE emergency response activities. ODOE provides a liaison to the State Emergency Coordination Center (ECC) when activated. ODOE maintains six 24/7 duty officers;
- Maintains WebEOC to communicate, share real-time information with federal, State, local, and industry response partners, coordinate response actions, and manage overall emergency operations;
- Maintains an established database containing fuel consumption figures, key contacts, and pre-designated emergency fueling locations for the State's emergency services and essential services sectors;
- Maintains database of fixed nuclear facilities, processing plants, and other radiological facilities on the Hanford Nuclear Reservation;
- Maintains emergency response plans to direct the State's overall response to petroleum, LNG, and nuclear emergencies to ensure the protection of public health and safety of Oregonians. Plans include:
Oregon Petroleum Contingency Plan – works to overcome possible threats to the availability of fuel resources necessary to maintain essential services and transportation throughout the State.

Oregon State LNG Emergency Response Plan – works to overcome possible threats to the safe transport, storage, and liquefying/regassifying of LNG in Coos County.

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Oregon Nuclear Emergency Response Plan – works to overcome possible threats to eastern Oregon residents and the agricultural products in the Pacific Northwest as a result of a radioactive materials release from fixed nuclear facility incidents in southeast Washington.

- Maintains the Fuel Allocation Program designed to ensure emergency fuel to priority users performing lifesaving functions, restoring Oregon’s critical infrastructure and preventing community hardships.
- Depending on the event and as resources allow, ODOE can provide responders to local Emergency Operations Centers for the duration of the emergency.

Capabilities

- ODOE is responsible for ensuring State and local emergency response organizations are trained and prepared to respond to petroleum, LNG, and radiological emergencies;
- Assess petroleum, LNG, and radiological facility and system damage, determine and issue protective actions to Oregonians, and monitor industry recovery efforts;
- May deploy ODOE responders as needed to local emergency operations centers to provide technical assistance and/or public information support;
- During a petroleum shortage, LNG incident, or nuclear incident, ODOE will respond to the Oregon State Emergency Coordination Center (ECC) when activated to serve as the principal liaison between the State and industry experts;
- Request federal and military assistance as appropriate when severe or long-term petroleum, LNG, and/or nuclear events exhaust State resources and Oregon’s ability to recover rapidly from an emergency situation. As lead State agency for ESF 12, ODOE works with the U.S. Department of Energy (USDOE – lead federal ESF-12) to request and coordinate the delivery of supplies, equipment and systems, and personnel to support Oregon’s recovery efforts.

Petroleum Program – assistance includes obtaining refined petroleum products, assistance in fuel delivery, establishing portable fueling locations, obtaining generators to allow petroleum terminals and pipeline companies to assess damages and restart facilities and systems with minimal delay, and other assistance as appropriate.

LNG Program – assistance includes providing response teams to track, detect, and clean-up LNG spills and leaks, support evacuations, and other assistance as appropriate.

Nuclear Program - assistance includes providing radiological monitoring teams to collect air, water, soil, vegetation, and milk samples to determine the extent of radiation contamination in affected areas, support in laboratory analysis, and other assistance as appropriate.

- ODOE can advise the Governor to request the federal government to waive a fuel or fuel additive requirement if doing so will alleviate the fuel supply crisis;
 - The U.S. Environmental Protection Agency (EPA) with the concurrence of USDOE may temporarily waive a fuel or fuel additive requirement under the Clean Air Act Section 211(C)(4)(C). A fuels waiver can be issued only when the criteria

specified in the Clean Air Act have been met and apply to gasoline and diesel fuel only.

- ODOE can provide a copy of an Oregon emergency declaration to the Federal Motor Carrier Safety Administration (FMCSA) which automatically lifts driver hour requirements to ensure fuel deliveries proceed without delay to ensure public health and safety;
- Coordinate the delivery of fuel to emergency and essential service providers as per the Oregon Petroleum Contingency Plan;
- Coordinate with the Oregon Department of Transportation to promote mobility conservation measures for the public during fuel emergencies to reduce fuel consumption by motorists;
- Coordinate with the Oregon Department of Justice to encourage Oregonians report possible cases of price gouging or price fixing at the pumps.

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;
- Petroleum Supply and Distribution System Constraints –Oregon has no internal crude resources or refining capabilities in the State. Oregon imports 100 percent of the refined petroleum products from sources outside of the State. More than 90 percent of refined petroleum products used in Oregon come from four refineries in the Puget Sound area of Washington State. Seventy-five percent of these products are transported by pipeline traveling 230 miles from the refineries to Oregon's petroleum distribution terminals located at the Port of Portland. Tanker vessels deliver the remaining fuel to the Port of Portland. Oregon also receives limited product in eastern Oregon from a Pasco, Washington terminal as well as limited product from Chico, California to southern Oregon communities.

Oregon is extremely vulnerable to severe or long term petroleum supply and distribution system disruption and damage. Located at the end of a pipeline with no alternative oil source in State or easily accessible source from neighboring states, Oregon will experience the supply pinch before states with internal crude supply and refining capabilities will likely need to implement fuel allocation.

- Interdependencies - Electrical power, communications capabilities, and viable transportation corridors are required to support fuel deliveries throughout the State.

Support Needed Immediately Following Catastrophic Event

- Access to adequate fuel inventory from outside the region;
- Assess and inventory of usable stored fuel supplies at petroleum terminals in Portland and Eugene. This includes available supplies at State motor pools, prisons, and other fleet services;

- Aerial (fixed wing and rotor) support for damage assessment of facilities and associated pipeline systems, as well as the resupply and insertion of response teams.

3.1.3 Public Utility Commission (OPUC)

Priorities

- Primary responsibility is to facilitate the restoration of energy utilities;
- Act as liaison between the State and the utility companies to coordinate restoration of energy and telecommunications utility delivery systems, in the most efficient manner;
- Facilitate communication with affected utility companies.

Assets

OPUC- Safety, Reliability and Security Division (SRSD)

- Coordination and contact information of:
 - Five investor owned utilities in electric and natural gas industries.
 - 33 publicly owned utilities with regard to municipal operations, public utility districts and electric rural cooperatives.
- Three Professional Engineers within structural, mechanical and electrical engineering disciplines;
- Three Operations Managers, with expertise in: technical, construction and maintenance environments;
- Four Certified Pipeline Inspectors;
- All OPUC SRSD field staff have assigned DAS 4WD vehicles that are home garaged. Field staff can respond from home if needed;
- OPUC currently has seven field inspectors;
- PPE supplies for field staff. Supplies carried by each inspector.

Capabilities

- Regulates the State's investor owned electric, natural gas and telephone utilities, and certain water companies;
- Ensure that utilities and companies have adequate emergency preparedness plans in place;
- During emergencies, disasters, and when the State ECC is activated, the PUC serves as the State's liaison to the utilities to exchange information, determine status of impacted systems;
- Provide assistance to ensure public utilities and PUC regulated entities can effectively restore electric and natural gas resources following a disaster which impact interdependent sectors;
- Ensure public utilities and PUC regulated entities mobilize and employ the necessary resources available in accordance with emergency plans, as applicable;
- Work with the Federal Department of Transportation – office of Pipeline Safety under the Pipeline and Hazardous Materials Safety Administration (PHMSA);

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- PHMSA has jurisdiction over the interstate pipeline administration; OPUC has jurisdiction over the intra State pipeline system;
- Interface with ODOT in securing access into the State with external mutual aid response equipment and personnel to those utilities to ensure compliance with port of entry regulations and weight mile taxing authorities and permits for heavy loads coming into the State;
- 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;
- OPUC has the authority to cite unsafe acts;
- Can provide accurate damage assessments to energy and telecommunications infrastructure;
- Teams are capable of maintaining a 12 hours on – 12 hours off rotation schedule for at least two to three weeks in duration;
- Have MOU with Oregon Department of Energy defining responsibilities, with regard to electrical and natural gas energy utilities and petroleum fuel resources.

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;
- Agency has stand-alone information technology systems (not a part of the State IT infrastructure) and has no redundant capabilities or interoperability with the State;
- No stand-by generators for agency office. Communications and information technology systems will be unavailable when the power goes down;
- 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 Telecomm divisions. Additionally, OPUC safety personnel and integrity management are dependent upon telecommunications capabilities to perform their duties.
- Additional trained 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.

3.2 Support Agencies

3.2.1 Department of Human Services

See ESF-6 for more DHS CSZ information

- DHS can provide assistance as appropriate when a disaster occurs that impacts energy resources causing any public health concern or crisis;
- Coordinate with ESF-12 on provision of energy utilities to shelters and ESF-6 facilities serving survivors.

3.2.2 Oregon Military Department

See ESF-7 for more OMD CSZ information

Capabilities

- Provides general support assistance as tasked;
- Provide security support;
- Petroleum movement;
- Provide additional generators (limited) for response operations.

Catastrophic Event Operational Challenges

- Has diesel fuel storage and transportation, could be converted for gasoline, but would need to be purged after use;
- CERFP vehicles are commercially available gasoline vehicles and are dependent on civilian petroleum infrastructure.

Support Needed Immediately After a Catastrophic Event:

- Additional personnel and equipment to fulfill ESF-12 mission tasks.

3.2.3 Oregon Department of Transportation

See ESF-1 for more ODOT CSZ information

Priorities

- Assess damage to roadways, bridges and tunnels and begin work on all that have been impacted. Response becomes recovery as roadways are made accessible and serviceable to get to impacted communities;
- Provide assistance to counties and local municipalities as support. (Oregon Public Works Emergency Response Cooperative Assistance Agreement);
- Identify heavily impacted areas and prioritize their repair;
- Identify and acquire assets to reach heavily impacted areas;
- Roadway repair priorities: provide an immediate and complete evaluation of 'lifeline' roads. Provide temporary accessibility and repair to make them usable for response and evacuation.

Assets

- Can augment ESF-12 response with:
 - Personnel & equipment for road assessment and establishing access for ESF-12 repairs;
 - Interoperable communications capabilities.

Capabilities

- Will work closely with energy resources due to proximity of power and gas lines running parallel to highways;
- Provide assessment of roads and determine accessibility / usability;
- Provide traffic control for ESF-12 repair activities;
- Provide staging areas for checkpoints of shipments of agriculture products coming from southeast Washington in the event of a radioactive materials release from Hanford or the Columbia Generating Station as a result of the incident;
- Provide technical assistance to transit providers to help with additional riders a fuel crisis would bring to transit systems;
- Impose highway restrictions as needed in the event of an energy resource emergency, to include actions such as reduced speed limits and new multi-occupant vehicle lane designations;
- Assist with distribution of fuel crisis information through local ODOT District and DMV offices;
- Road infrastructure assessment and repair.

Catastrophic Event Operational Challenges

- Many energy conduits run parallel to or directly in contact with roads and bridges in the State; this interconnectivity may increase repair times;
- No capability within ODOT of transporting fuel;
- Road and Energy infrastructure information are not in sync. In a catastrophic event, energy utilities and ODOT will have to collaborate on data collection as far as roadway accessibility and energy lifelines are concerned. Energy infrastructure is not shared due to Homeland Security and safety concerns.

Support Needed Immediately After a Catastrophic Event

- Immediate request for personnel and equipment through EMAC will be first needed. Response to this kind of incident cannot be done with the current amount of equipment and personnel;
- Likely be asking for assistance from USN, Coast Guard and other military support to assist with getting equipment and personnel via air or sea into the coastal areas due to expected road damage and coastal inaccessibility from inland;
- Fuel;
- PPE for responding personnel.

3.2.4 Oregon State Police

See ESF-13 for more OSP CSZ information

Priorities

- Ensure safety of personnel and facilities;
- Ensure safety of public;
- Coordinate with primary agency for ESF-12 needs of OSP assets and abilities following incident;
- 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

- Some key personnel with assigned and home-based patrol vehicles;
- Employees are encouraged to have emergency plans for their homes and families as well as food for at least 7 days;
- Some Troopers have APR's (air purifying respirators);
- Some Troopers have HAZMAT suits. However this PPE is not standard issue;
- Each OSP response area EOP has a section of identified critical facilities for that area;
- Have cooperative policing agreements / MOU's, in State with almost all 36 counties. These are written agreements that haven't been renewed or OSP now performs these functions on a verbal agreement;
- Have mutual aid agreements with Washington, Idaho, California, and Nevada where we can ask for emergency mutual aid within 50 air miles. This is a verbal emergency request.

Capabilities

- Develop and maintain a liaison between local, State and federal law enforcement agencies in Oregon;
- Because OSP is often first on-scene during an emergency, it may act as an initial incident command agency until the local incident command agency is on-scene, or if no local agency is available;
- OSP personnel at a disaster scene may provide limited damage assessment as their duties permit;
- Provide for security of dams and hydroelectric facilities;
- Provide for security of transformer sites;
- In addition to enforcement and specific services, OSP provides for the protection of life and property, traffic control, crowd control, communications, emergency first aid, site security, and security for vital State facilities and critical infrastructure;
- Could provide security for energy systems if they fell under a threat and only as directed if necessary.

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;
- Accessibility to fuel resources; current fuel resources may last for approximately four days;
- Coastal offices are unlikely to be functional; several coastal offices are located on docks which will be severely impacted by this event;
- Roadway damage will limit movement and impact a unified response;
- Radio and repeater sites are supplied with generator back-up power and will run out of fuel within three – four days without being recharged with fuel;
- Employees with cars and capabilities throughout State may be isolated and unable to respond due to road / bridge damages.
- OSP vehicles are commercial fuel dependent – and dependent on electricity to access those fuel resources;
- OSP has limited resources and personnel in the State; may be challenging to meet demand for response services.

Support Needed Immediately Following a Catastrophic Event

- Fuel for continued OSP operations and maintaining facilities functioning under generator power;
- Support for fueling vehicles without electricity;
- Communications issues will need to be resolved;
- OSP doesn't have supply of food or water for personnel once personal supplies are expended.

4 ESF-12 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Energy assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

ODOE operates an agency Emergency Operations Center (EOC) in Salem. The agency EOC serves as the Statewide coordination point for ODOE emergency response activities. ODOE provides a liaison to the State Emergency Coordination Center (ECC) when activated. ODOE maintains six 24/7 duty officers. ODOE is responsible for ensuring State and local emergency response organizations are trained and prepared to respond to petroleum, LNG, and radiological emergencies.

In the event of a petroleum emergency, ODOE would direct and coordinate the State's overall response effort. ODOE will assess the severity and duration of a supply shortage or disruption, identify potentially affected areas, determine the risks and potential impacts to Oregonians, and advise the Governor on how best to protect the health and safety of Oregonians and the State's economy. This includes recommending and implementing voluntary or emergency conservation measures to reduce the use of

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petroleum products in the State and implementing Fuel Allocation Procedures if necessary. ODOE is also responsible for coordinating all emergency information and instructions released to the public and news media regarding the State's response effort and emergency actions.

The Oregon Petroleum Contingency Plan includes a Statewide fuel allocation program. If fuel allocation becomes necessary, ODOE would administer the State's Fuel Allocation Program and designate the set-aside volume. ODOE is responsible for working with the State's petroleum suppliers and wholesalers to implement the set-aside volume for use by the State. The set-aside program is designed to interfere minimally with the market, using set-aside volumes that are sufficient only to satisfy hardship and emergency cases. The set-aside program makes no attempt to reduce or inhibit the market price of fuels. All fuel delivered through the program will be purchased at the market price, and whenever possible, through the usual supplier.

ODOE's Fuel Allocation Program is designed to ensure emergency fuel to priority users performing life saving functions, restoring Oregon's critical infrastructure, and preventing community hardships. ODOE uses a three-tiered approach for allocating fuel to priority users. Tier 1 covers the State's emergency services providers. Tier 2 covers the State's essential services providers. Tier 3 allows for a community to request fuel supplies from the State set-aside. A community must show it has an emergency or hardship caused by a shortage of fuel or is receiving relatively less than other areas of the State. Providing emergency fuel to communities is the only element where retail service stations may receive a set-aside allocation. However, the State will not direct set-aside volumes to specific stations. It will direct prime suppliers to release a certain volume to an area through normal supply channels.

During a fuel supply shortage situation, the need for a method to alleviate potentially long lines at retail service stations may arise. ODOE would implement the Odd/Even Fuel Allocation Measure for the public as appropriate.

All fuel rationing activities requires an Energy Emergency Declaration from the Governor.

In the event of an emergency at an LNG import terminal or along the transport route, ODOE will direct and control the State's overall response effort. This includes:

- Receiving initial notifications from LNG developers about an event,
- Notifying and/or establishing contact with all affected federal, State, and county emergency response organizations to ensure a coordinated response,
- Working with the U.S. Coast Guard, State agencies, and local emergency response organizations to assess the severity of the event, determine impacts to Oregon, and advise the Governor on protective actions for the public, and
- Developing and disseminating emergency information to the public and the news media.

4.1 Objective

ESF-12 will closely coordinate with the electric and natural gas utilities operating in the State to ensure the integrity of power supply systems are maintained during a catastrophic earthquake and resultant tsunami and any damages incurred are repaired and services restored in an efficient and expedient manner afterward.

ESF-12 will have primary responsibility to monitor and coordinate the availability of the following: electric utility generating capacity and reserves, the availability and supply of natural gas, supply and transportation of generation and transportation fuels, and emergency power. ESF-12 will also monitor and coordinate the restoration of electric and natural gas services for normal community functioning.

Additionally, this ESF will coordinate providing sufficient fuel supplies to emergency response organizations and areas providing life sustainment to survivors.

4.2 Challenges

- Infrastructure interdependencies create a demand for a synchronized approach to restoring capacity;
- Limited availability of repair parts for major system components are in short supply and have long lead times to replace;
- Lack of working phone lines will limit the ability to assess damage to the power grid.

4.3 Assumptions

- The initial earthquake will cause an immediate region wide power outage;
- Access to systems and facilities will be limited due to significant damage to road network;
- Loss of power will last for months throughout the impacted area;
- Damage to natural gas and petroleum pipelines will contribute to fuel shortages in entire region;
- Dams and levees will sustain damage during the initial earthquake and will require immediate assessment.

4.4 ESF 4 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Damage assessment capability for the energy sector. (Power, Gas, Water, Petroleum)	▪ Aerial Platforms to conduct visual inspections to key infrastructure sites. ▪ Tactical Communications support to coordinate infrastructure assessments/repair. ▪ Geospatial prioritization for assessments.
Limited access to the impacted area	▪ Rotary wing support to transport repair teams. ▪ Security for repair and assessment teams. ▪ Debris clearance to provide access to impacted area. ▪ Waivers for driver restrictions and oversize vehicles on public roads.
Availability of the State to provide adequate repair and restoration crews.	▪ Coordinate priorities and requirements between public and private sector partners. ▪ Rapid deployment for out of State repair crews and the ability to sustain them. ▪ Functional equipment and spare parts to maintain response.

4.5 Concept of Operations

ESF-12 functions include but are not limited to:

- Maintain communication with utility representatives to determine emergency response and recovery needs;
- Advise authorities on priorities for energy restoration, assistance, and supply;
- Coordinate with ESF-6 to identify emergency shelter power generation status/needs; and coordinate with other ESFs with assistance in providing resources for emergency power generation;
- ESF 12 will serve as the resident expert in post-incident assessments of energy and utilities to help determine critical needs and potential workloads;
- Requests technical support to help facilitate efforts to obtain necessary regulatory clearances for infrastructure restoration activities;
- Provide status of energy resources to the SEOC Operations Group as required and, when possible, provide data by county;
- In coordination with public and private utilities, prioritize rebuilding processes, if necessary, to restore power to affected areas;
- Coordinate sourcing of fuel to support emergency fuel operations;
- Apply necessary State resources, to include debris removal, in accordance with established priorities;
- Provide post-event energy emergency information, education and conservation guidance to the public in coordination with ESF-15;
- Coordinate with ESF-1 for information regarding transport of critical energy supplies;
- Plan for and coordinate security for vital energy supplies with ESF-13;
- Maintain continual status of energy systems and the progress of utility repair and restoration activities to include collecting and providing energy damage assessment data to State ECC.

5 Supporting Documents

- National Response Framework, ESF 12 – Energy
- County ESF 12 Annexes
- PUC-Utility Emergency Response Binder
- ODOE-OPUC Procedural Flowchart & existing MOU
- OHA-Public Health Radiological Response Plan

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 13 – Public Safety and Security

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ESF 13. Public Safety and Security

ESF 13 Tasked Agencies	
Primary Agencies	Department of Justice (DOJ) Oregon Judicial Department (OJD) Oregon State Police (OSP)
Supporting Agencies	Department of Administrative Services (DAS) Department of Corrections (DOC) Department of Fish and Wildlife (ODFW) Oregon Military Department (OMD) Oregon Department of Transportation (ODOT)
Adjunct Agencies	All Law Enforcement Agencies

1 Purpose

Public Safety and Security integrates public safety and security capabilities and resources to support the full range of incident management activities associated with law enforcement and public safety operations during catastrophic disaster conditions. Includes support to local law enforcement agencies.

2 Scope

ESF 13 provides a mechanism for coordinating and providing support to local and tribal authorities to include non investigative/non-criminal law enforcement, public safety and security capabilities and resources during disaster conditions. ESF 13 capabilities support incident management including force and critical infrastructure protection, security planning and technical assistance, technology support, and public safety in both pre-incident and post-incident situations.

- Pre-incident coordination supports incident management planning activities and pre-incident actions required to assist in the prevention or mitigation of threats and hazards. This includes the development of operational and tactical public safety and security plans, the conducting of technical security and/or vulnerability assessments, and deployment of State public safety and security resources in response to specific threats for potential incidents.
- Technical assistance provides expertise and coordination for security planning efforts and conducting technical assessments (e.g. vulnerability assessments, risk analyses, etc.).
- Access Control / Site Security provide security forces to support local efforts to control access to the incident site, critical facilities and/or critical infrastructure.
- Security for the Strategic National Stockpile movements within Oregon.
- Specialized Security resources include specialized security assets such as traffic barriers; canine units; law enforcement personal protective equipment; etc.

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Department of Justice/FUSION Center

DOJ Priorities

- Ensure safety of personnel and facilities;
- Public safety and security;
- Provide legal services and support as needed to the Governor's office and State agencies.

FUSION Center Priorities

- Support law enforcement in all areas;
- Support the Attorney General;
- Enable continuity of government in assisting law enforcement agencies and criminal justice divisions at the local and county levels;
- If needed, can call upon FUSION Center personnel from any outside state to assist;
- Can provide security for mobile court system.

Assets

FUSION Center

- Primary FUSION Center facility is located in Salem, with an alternate facility located in Wilsonville (if the bridge is up), FUSION Center North;
- Facility has bandwidth priority for internet;
- Personnel – 28 officers with gear and clerical staff;
- 35 vehicles of which 25 are 4WD Jeeps (20+ have radios that are interoperable / OSP frequencies);
- Two satellite phones.

Capabilities

DOJ Capabilities

- The Crime Victims Services Division of the DOJ hosts a Statewide team of multidisciplinary trained crisis responders to assist in the aftermath of a disaster.
- The Crisis Response Team (CRT) has the capacity to mobilize on a county or State level to help groups of affected people to cope with immediate crisis reactions and plan for ongoing support in the aftermath of an incident of criminal mass trauma. The Division works in collaboration with local Victim Assistance and non-profit victim service programs, the FBI Victim Assistance, the Red Cross, DHS Behavioral Health staff and the National Organization for Victims' Assistance (NOVA).

FUSION Center Capabilities

- Develop and maintain a liaison between local, State and federal law enforcement agencies in Oregon and encouraging cooperation among those agencies;
- Run background checks on convergent volunteers to facilitate their use;
- Assist clerical needs;

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- Supplement all areas of law enforcement, including patrol, investigation, jail operations, and crowd control;
- Officers could provide limited security for shelters and feeding areas.

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;
- Transportation system damages making movement into the impact area a huge challenge;
- Viable locations to set up equipment in the impacted area.

Support Needed Immediately After a Catastrophic Event

- Fuel;
- Electricity, Internet and communications assistance;
- Air resources to move equipment and personnel;
- Diesel fuel for generators;
- Billeting, food, sanitary facilities for response teams.

3.1.2 Oregon Judicial Department

"Our courts are committed to providing safe and secure facilities that will ensure the availability of justice in Oregon's communities. Emergencies, disasters, and accidents affecting court operations can occur at any time, usually without warning. Proper planning and a prompt response are essential to ensure continued court services and access to court records."- Chief Justice's 2009-13 Strategic Plan.

Priorities

Priorities (first 48 hours)

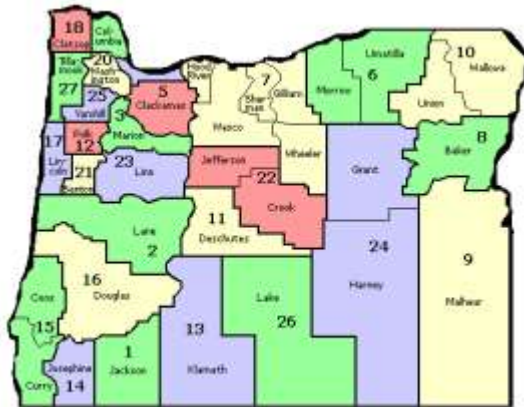
- Ensure safety of personnel and facilities;
- Public safety and security;
- Support the local courts capabilities;
- Maintain Circuit Courts Critical Functions:
 - Conduct arraignments: Recovery time must be within 36 hours.
 - Conduct hearings: Recovery time must be within 48 hours.
 - Process restraining orders: Recovery time must be within 48 hours.
 - Process case records and moneys: Business function must be available each business day.
- Maintain Supreme Court, Court of Appeals, and Tax Courts critical functions:
 - Maintain court filings and communications
 - Building Services
- Maintain Office of the State Court Administrator critical functions:
 - Executive Leadership

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- Agency Communications
- Human Resource Services Division (HRSD) Consultation
- Legal Counsel Division Advice
- Court Interpreter Services (CIS)
- Payroll Check Distribution-Business and Fiscal Services Division (BFSD)
- Appellate Court Management System (ACMS), / Oregon Judicial Information Network (OJIN) /Financial Integrated Accounting System (FIAS) - Enterprise Technology Services Division (ETSD)
- Secure Network Communications
- Building Services
- Security and Preparedness

Assets

- Oregon Judicial Districts:



- OJD Emergency Response Trailer Program
 - Two equipped emergency response trailers which serve as the Mobile Court System; one located in Salem, one located in Bend;
 - Two-four members of the emergency response team will deploy with the trailer. The staff will stay with the trailer during business hours. Requesting court/division is responsible for after hours' security for the trailer and equipment.
 - Two Enterprise Technology Services Division (ETSD) computer technicians.
 - One Oregon Judicial Department Security and Emergency Preparedness Office emergency management subject matter expert.
 - One Oregon Judicial Department Security and Emergency Preparedness Office business continuity subject matter expert.
 - Powered by 15 KW diesel generators;
 - Trailers include satellite communications systems, computers and printers;
 - VHF public safety radio system;

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- 95 satellite phones – two per circuit court with Statewide distribution.

Capabilities

- Ability to re-establish court business in a secondary or back-up location;
- Ability to provide internet and secure OJD intranet connectivity to a backup judicial location;
- Portable video conferencing capabilities;
- Ability to set up a climate-controlled, mobile Judicial facility should no other suitable temporary building be available;
- Activation of the Emergency Response Trailer will be generated through OERS to the Oregon Judicial Department. The Emergency Response Trailer can be used for other purposes providing that it is not needed at the Oregon Judicial Department level.

Support Needed Immediately After a Catastrophic Event

- Fuel;
- Electricity, Internet and communications assistance;
- Air resources to move equipment and personnel;
- ¾ Ton or larger truck with 2 5/16 ball and electric brakes for emergency response trailers;
- Suitable space for emergency response trailers – 20' X 84' grass or concrete area (no gravel);
- Diesel fuel for generators;
 - 30 amp RV connection (for IT equipment);
 - 50 amp connection (for heating tents);
- Billeting, food, sanitary facilities for response teams.

3.1.3 Oregon State Police

- Oregon Emergency Response System (OERS): OERS is the primary point of contact by which any public agency provides the State notification of an emergency or disaster, or requests access to State or federal resources. OERS provides a 24-hour service.
- Criminal Justice Information System (CJIS)/ Law Enforcement Data System (LEDS) is the focal point and “control agency” for access by law enforcement and criminal justice agencies in Oregon to the online information in the Federal Bureau of Investigations (FBI) National Crime Information Center (NCIC), the interstate law enforcement message switching network, and the National Law Enforcement Telecommunications System (NLETS), which is operated by a consortium of states. Since CJIS/LEDS computer terminals are located Statewide in all law enforcement agencies and most public safety agencies, the system is used to relay critical public safety information both day-to-day and during disasters.
- Medical Examiner Division is the lead agency in the implementation of the Mass Fatalities Incident Annex to the State EOP. Activation of this annex is likely to occur as a result of this incident due to overwhelming the local medical examiner’s resources. The goal of this annex is to provide for identification of the deceased, documentation of the cause and manner of death, safeguarding the property of the

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deceased and to return the property of the deceased and their remains to the next-of-kin.

- OSP operates two Regional Dispatch Centers (RDC). RDC locations are: Salem (northern) and Medford (southern). OSP maintains a presence in the State ECC when activated.

Priorities

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

- Key personnel have assigned and home-based patrol vehicles.
- Employees are encouraged to have emergency plans for their homes and families as well as food for at least seven days;
- 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;
- Three primary divisions: patrol, criminal division and fish and wildlife division;
- Have mutual aid agreements with Washington, Idaho, California, and Nevada where we can ask for emergency mutual aid within 50 air miles. This is a verbal emergency request;
- Some Troopers have APR's (air purifying respirators);
- A limited number of Troopers have HAZMAT suits. However this PPE is not standard issue;
- Each OSP response area EOP has a section of identified critical facilities for that area;
- Have cooperative policing agreements / MOU's, in State with almost all 36 counties. These are written agreements that haven't been renewed or OSP now performs these functions on a verbal agreement;

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OSP Regional Offices:			
Northwest Region HDQS 3710 Portland Road NE Salem, OR 97301 Phone: 503-378-3387 Fax: 503-373-0754	Albany Area Command 3400 Spicer Road Albany, OR 97322 Phone: 541-967-2026 Fax: 541-967-2164	Astoria Area Command 413 Gateway Ave Astoria, OR 97103 Phone: 503-325-5515 Fax: 503-325-6167	Capitol Mall Patrol Office 900 Court Street NE, Room 60C Salem, OR 97310 Phone: 503-986-1122 Fax: 503-986-1540
Florence Worksite P.O. Box 1 4480 Highway 101 Bldg. E Florence, OR 97439 Phone: 541-997-9635 Fax: 503-997-2958	Government Camp Worksite 90300 E. Highway 26 Government Camp, OR 97028 Phone: 503-272-3280 Fax: 503-272-3105	McMinnville Area Command 3975 SE Cirrus Avenue McMinnville, OR 97128 Phone: 503-472-0294 Fax: 503-434-5750	Newport Area Command P.O. Box 947 52 NE 73rd Street Newport, OR 97365 Phone: 541-265-5354 Fax: 541-265-8243
North Plains Worksite 29495 NW West Union Rd, North Plains, 97133 Phone: 503-647-7631 Fax: 503-647-1906	Oakridge Worksite P.O. Box 686 76389 Fish Hatchery Road Oakridge, OR 97463 Phone: 541-782-4374	Oregon State University Patrol Office 200 Cascade Hall Corvallis, OR 97331 Phone: 541-737-3010 Fax: 541-737-0468	Portland Area Command 8085 SE Deer Creek Lane Milwaukie, OR 97222 Phone: 503-731-3020 Fax: 503-731-3029
St. Helens Worksite 35851 Industrial Way Ste A, St. Helens, 97051 Phone: 503-397-0325 Fax: 503-397-0607	Salem Area Command 3710 Portland Road NE Salem, OR 97301 Phone: 503-378-3387 Fax: 503-373-0754	Springfield Area Command 3620 Gateway Street Springfield, OR 97477 Phone: 541-726-2536 Fax: 541-726-2560	Tillamook Worksite 5995 Long Prairie Road Tillamook, OR 97141 Phone: 503-842-2899 Fax: 503-842-5250
Tualatin Worksite 8650 SW Tualatin Road Tualatin, OR 97062 Phone: 503-691-4870 Fax: 503-691-9527	Southwest Region HDQS 4500 Rogue Valley Highway Phone: 541-776-6114 Fax: 541-664-8762	Central Point Area Command 4500 Rogue Valley Highway Ste A, Central Point, 97502 Phone: 541-776-6236 Fax: 541-664-8762	Coos Bay Area Command 155 North Schoneman Coos Bay, OR 97420 Phone: 541-888-2677 Fax: 541-888-9546
Gold Beach Worksite 28200 Hunter Creek Gold Beach, OR 97444 Phone: 541-247-6641 Fax: 541-247-2392	Grants Pass Worksite 1463 NE 7th Street Grants Pass, OR 97526 Phone: 541-955-6370 Fax: 541-955-6380	Klamath Falls Area Command 2525 Biehn Street Klamath Falls, OR 97601 Phone: 541-883-5713 Fax: 541-883-5556	Lakeview Worksite 1269 S. "G" Street Lakeview, OR 97630 Phone: 541-947-2267 Fax: 541-947-3308
Roseburg Area Command 761 NE Garden Valley Roseburg, OR 97470 Phone: 541-440-3334 Fax: 541-440-3404	East Region Headquarters 20355 Poe Sholes Drive Suite 100 Bend, OR 97701 Phone: 541-388-6213 Fax: 541-388-6241	Baker City Worksite 39155 Pocahontas Road Baker City, OR 97814 Phone: 541-523-5867 Fax: 541-523-6707	Bend Area Command 20355 Poe Sholes Drive Suite 100 Bend, OR 97701 Phone: 541-388-6213 Fax: 541-388-6241
Burns Worksite 90 West (A) Street Burns, OR 97720 Phone: 541-573-6132 Fax: 541-573-3351	Enterprise Worksite 65495 Alder Slope Road Enterprise, OR 97828 Phone: 541-426-3049 Fax: 541-426-3293	Gilchrist Worksite P.O. Box 758 105 Mississippi Drive Gilchrist, OR 97737 Phone: 541-433-2620 Fax: 541-433-2646	Heppner Worksite PO Box 549 Heppner, OR 97836 Phone: 541-676-0804 Fax: 541-676-9075
Hermiston Worksite 860 W. Elm Avenue Ste 102 Hermiston, 97838 Phone: 541-567-3215 Fax: 541-567-3260	John Day Worksite 545 East Main Street John Day, OR 97845 Phone: 541-575-1363 Fax: 541-575-0536	LaGrande Area Command 3014 Island Avenue LaGrande, OR 97850 Phone: 541-963-7175 Fax: 541-963-8027	Madras Worksite 1713 Highway 97 Madras, OR 97741 Phone: 541-475-6573 Phone: 541-388-6213 Fax: 541-475-6154

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Ontario Area Command 325 NE Goodfellow Street Ontario, OR 97914 Phone: 541-889-6469 Fax: 541-889-2167	Pendleton Area Command 618 Airport Road Pendleton, OR 97801 Phone: 541-278-4090 Fax: 541-276-8027	Prineville Worksite 934 Madras Hwy (Physical) 400 NE 3rd Street (Mail) Prineville, OR 97754 Phone: 541-416-0852 Fax: 541-416-0856	The Dalles Area Cmd 3313 NE Bret Clodfelter Way The Dalles, OR 97058 Phone: 541-296-9646
Northern Region Communications Center 3225 State Street Salem, OR 97301 Phone: 503-375-3555, Fax: 503-585-6635		Southern Region Communications Center 4500 Rogue Valley Highway Suite A, Central Point, OR 97502 Phone: 541-776-6111, Fax: 541-664-5287	

Capabilities

- Law enforcement jurisdiction over State roads, State parks, State lands & property;
- Fish and wildlife division is focused on the protection of natural resources;
- COOP plans call for regional command staff to respond to local emergency operations centers when events of this magnitude happen;
- OSP offices have boats to use for rescue in an emergency, Statewide. Fish and wildlife troopers use boats in the enforcement of fish and wildlife and fisheries management. Most of these boats are small and are used on rivers and lakes;
- Some OSP offices have generators;
- Have an ocean going boat over 40' moored in Astoria;
- Two primary dispatch centers in the State. If repeater sites are still up and running on generator power, will have communication capability for up to a week before fuel is needed in the generators;
- Key offices have satellite phones;
- Develop and maintain a liaison between local, State and federal law enforcement agencies in Oregon;
- Because OSP is often first on-scene during an emergency, it may act as an initial incident command agency until the local incident command agency is on-scene, or if no local agency is available;
- OSP personnel at a disaster scene may provide limited damage assessment as their duties permit;
- In addition to enforcement and specific services, OSP provides for the protection of life and property, traffic control, crowd control, communications, emergency first aid, site security, and security for vital State facilities and critical infrastructure;
- Generally, law enforcement within the disaster/emergency area remains the responsibility of local authorities along established jurisdictional boundaries, unless State assistance is requested or required by statute;
- Assist with evacuations;
- Provide peace keeping missions on the roadways;
- COOP plan directs Troopers to self-dispatch to local community EOC's when all communications are lost;
- Support security of logistics efforts;
- Can provide limited assistance with search and rescue and lifesaving evacuations;
- Escort transit of and provide security of Strategic National Stockpile;

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- Work with ODOT to open roadways and establish routes to use to facilitate logistical support to the coastal areas, and evacuation routes;
- Some OSP personnel are HAM radio operators; however OSP doesn't coordinate the resource and do not use it in a functional capacity.

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;
- Accessibility to fuel resources, current fuel resources may last for approximately four days;
- Coastal offices are unlikely to be functional; several coastal offices are located on docks which will be severely impacted by this event;
- Roadway damage will limit movement and impact a unified response;
- Radio and repeater sites are supplied with generator back-up power and will run out of fuel within three-four days without being recharged with fuel;
- Personnel with cars and capabilities throughout State may be isolated and unable to respond due to road / bridge damages;
- OSP vehicles are commercial fuel dependent – and dependent on electricity to access those fuel resources;
- OSP has limited resources and personnel in the State; may be challenging to meet demand for response services.

Support Needed Immediately Following a Catastrophic Event

- Fuel for continued OSP operations and maintaining facilities functioning under generator power;
- Support for fueling vehicles without electricity;
- Communications issues will need to be resolved;
- OSP doesn't have supply of food or water for personnel once personal supplies are expended.

3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for additional DAS CSZ information

- DAS provides logistics management and resource support in coordination with ESF 7.
- Provide support by locating, purchasing and coordinating delivery of resources necessary during or after an incident in the State of Oregon which requires a coordinated State response.

3.2.2 Department of Corrections

Priorities

- First priority for all Oregon DOC facilities is to make themselves and their facilities whole and functional first. No assistance will be available to the response effort until this is complete (keep public safe by ensuring inmates stay inside);
 - Facilities are contained and able to get up to operational status without outside assistance
 - May take one day to one week (or longer?) to get “whole” before they can help State and accept mission assignments
- Must clear facility access paths and roads on site before they can even get to ingress/egress roads;
- Can take State mission assignments after prisons are secure and “whole” again.

Capabilities

- Currently uniformed DOC staff can act as peace officers in the State of Oregon only in response to an inmate escape;
- Limited portions of DOC staff are trained in the following functions:
 - crisis negotiations
 - critical incident stress
 - hostage rescue
 - inmate/high risk transport
 - riot suppression
- Every facility in Oregon has a “cover-down” plan to move inmates to other facilities;
 - Each facility can receive another prison’s inmates in their entirety
- Plans are comprehensive and practiced/trained regularly (inmate moves occur regularly for other reasons as well);
- Each DOC facility has medical personnel to help injured at the facilities;
 - Basic medical needs of inmates & staff are met on site at each facility
- Clean-up crews (debris removal);
- Can provide temporary housing (Fire camp tents or at unused /underused DOC facilities);
 - 10% of beds in prison facilities can be used for temp housing
- Provide equipment and operators;
 - Evacuations (moving people)
 - Trucks, bulldozers, other heavy equipment
- Can possibly augment response with DOC fuel supplies.

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Assets

- DOC manages 15 correctional facilities in Oregon and two distribution facilities (Salem & Ontario);
- Facilities have heavy equipment (trucks, bulldozers, etc.) in Salem (near Lancaster & State Streets) & Ontario (Snake River Distribution Area) storage locations;
 - Semi-trucks (sleepers)
 - Also have refrigeration & dry good trucks
 - Vehicles have manual fuel pumps on board
 - Some earthmoving equipment (bulldozers, dump trucks)
 - Staff at every facility have CDLs
 - Trained forklift operators (staff and inmates)
- Approximately 143,000 gallons of diesel stored at central processing location;
- Fuel on site at all DOC facilities (need State Voyager card to fuel);
- Two structural engineers on contract (one in south part of Oregon, one in northern);
- Certified tactical team / WMD (one in Oregon);
 - Specialty team (18 operators per team)
 - More in line with law enforcement trained officers
- DOC personnel well trained for intake;
 - Intake personnel process 300+ inmates per week
 - Experts in Oregon for this task
 - DOC intake personnel are unarmed
- Critical Stress Incident Management (CSIM) – crisis counseling team;
 - Line of duty death
 - Peer counseling
 - Family death
 - CSIM counselors (ESS group) have lawyer/client privileges
 - Could be used in State ECC and other facilities for responder staff members
- Gang Task Force (could be tasked by State and used for security);
 - Not as prepared for riot-type situations as cops are
 - Can be deputized to function as law enforcement
 - Provide security for firefighters and EMS
- ODC is self-sustaining for approx. 14 days (similar for all facilities);
 - Stores of salt, gravel, etc., to maintain their properties kept on site at prisons (but ingress/egress away from DOC facilities would need ESF #1 assistance)
 - Prisons keep food supplies for four days

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- DOC personnel are trained to be deployed to other DOC facilities;
- Has retiree cadre that could be called upon to assist with DOC operations;
- Have backup and interoperable communications on site at DOC facilities;
 - Locations east of Cascades facilities may be able to immediately assist State with communication capabilities
- DOC Facilities have generators and back-up fuel;
- All correctional facilities in Oregon have current and constantly updated emergency management plans;
 - Staff well trained to activate plans and respond
 - Very comprehensive plans for all scenarios
 - Plans exercised (and plans activated for many other scenarios routinely)

Catastrophic Event Operational Challenges

- DOC will maybe have 10% of personnel to assist with Statewide response;
- DOC can go two-three days (realistically, at best) without staff relief for their own facilities;
 - Possibility some of DOC staff will walk off job in this event to care for families
 - DOC will be short staffed immediately after any event like this and may initially need assistance with their own tasks.
- Ingress/egress to facilities West of Cascades.

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;
- Accessibility to fuel resources;
- Additional trained personnel to assist with DOC operations;
- Transportation assistance to reach DOC facilities;
- Aerial (fixed wing and rotor) support for evacuation, resupply and insertion of teams.

3.2.3 Oregon Military Department

Priorities

- Immediate assessment of surviving equipment and units available for response (including maintenance facilities);
- Establish communications with OMD facilities Statewide and begin implementation of Area of Responsibility (AOR) plans;
- Activation of NGRF (National Guard Response Force);
- Recall of personnel;
- The Oregon National Guard may engage in immediate response lifesaving response actions for up to 72 hours at individual unit commander's decision;
- Re-establish Statewide air traffic control;

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- 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

- NGRF can provide 125 personnel within 12 hours (approx. 83 located in the Portland Metro area, the remainder in Klamath Falls). 375 additional personnel could be available within 36 Hours (located in Springfield);
- UH-60 Blackhawk helicopters based in Salem;
 - Medical evacuation capability.
- CH-47 heavy lift helicopters based in Pendleton;

Capabilities

- Provide law enforcement support when activated by civil authorities;
- Interact, augment and support local police;
- Aerial support of ESF-13 operations;
- Riot control;
- Traffic control;
- Security of tasked facilities;
- Evacuation assistance and support;
- Provide identification and badging;
- Depending on established rules of force, Oregon National Guard personnel (NGRF) may have the capability to detain and arrest capability (external military units would not have this ability, and would be unarmed).

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.
- Accessibility to fuel resources;
- Transportation of personnel could be an issue;
- Unknown percentage of National Guard personnel serving as first responders as their full-time profession;
- All non-lethal force equipment is all located at PANG, units accessing these may be unable to reach that facility.

Support Needed Immediately After a Catastrophic Event

- Transportation of personnel;
- Personnel to support ESF-13 operations;
- Additional vehicles and operators;

ESF 13. Public Safety and Security

- Additional fuel to sustain operations;
- Heavy lift rotary aircraft;
- Fixed wing aircraft.

3.2.4 Oregon Department of Transportation

See ESF-1 for additional ODOT CSZ information

Priorities

- Provide ODOT assistance where needed and directed by ESF-13 to ensure safety and security of impacted areas;
- Assess damage to roadways, bridges and tunnels and begin work on all that have been impacted. Response becomes recovery as roadways are made accessible and serviceable to get to impacted communities;
- Roadway repair priorities: provide an immediate and complete evaluation of 'lifeline' roads. Provide temporary accessibility and repair to make them usable for response and evacuation;
- Identify heavily impacted areas and prioritize their repair;
- Identify and acquire assets to reach heavily impacted areas.

Assets

- Capability of providing jersey walls, secured areas with barricades;
- Personnel and equipment to assist with safety and security of hazardous / dangerous areas of operations as well as nonoperational impacted areas to be evacuated.

Capabilities

- Work in a Unified Command with Law Enforcement, Fire, Department of Corrections, Fish and Wildlife, Forestry, Military Department. Will support Safety and Security by providing barricades, securing areas in cooperation with law enforcement, fire search and rescue;
- Provide personnel and assets as requested in support of ESF-13;
- Provide signage for traffic control and to security;
- Establish routes for safe and prompt evacuation of impacted areas;
- Coordinate with ESF-13 on priority roadway clearance and repair;
- Provide traffic control to support law enforcement activities;
- Coordinate security activities with law enforcement for State owned transportation 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;
- 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;

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- 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.

Support Needed Immediately After a Catastrophic Event

- Immediate request for personnel and equipment through EMAC will be first needed. 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
- Likely be asking for assistance from USN, Coast Guard and other military support to assist with getting equipment and personnel via air or sea into the coastal areas due to expected road damage and coastal inaccessibility from inland;
- Fuel;
- No capability within ODOT of transporting fuel;
- PPE for responding personnel.

4 ESF-13 Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Public Safety and Security assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

4.1 Objective

To coordinate Statewide law enforcement operations, including support to local law enforcement agencies.

4.2 Challenges

- Limited Law Enforcement resources to provide on-site security to all required areas after event;
- Providing security for geographically dispersed areas with limited law enforcement capabilities.

4.3 Assumptions

- Immediate operational response to a disaster situation is the responsibility of local law enforcement in whose area the disaster occurs. However, due to the widespread regional nature of the event, local law enforcement capabilities may be severely limited;
- Law enforcement support to local law enforcement will require providing hundreds of law enforcement and security personnel from outside of the disaster areas into the impacted areas. It is not probable that unaffected areas of Oregon can meet this need;

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- Demand for law enforcement support for the incident from local, county and the State will exceed the current capability;
- Existing detention facilities in the shake zone will have significant damage and will have to be evacuated;
- Additional security personnel and equipment will be delayed due damage transportation and communications systems.

4.4 ESF-13 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Force protection support for operations and facilities.	▪ Management and prioritization of assignments of limited personnel to provide security assessments and coordinate State-wide security issues. ▪ Security teams to provide on scene security for response operations and facilities. ▪ Provision of trained security to shelter and feeding locations. ▪ Increased ability to credential volunteers and identify persons who may be of concern to the safety of survivors.
Qualified Law Enforcement personnel	▪ Additional law enforcement personnel and equipment. ▪ Life support and logistics support for law enforcement personnel. ▪ Tactical communication support. ▪ Clear guidance on the authorities and responsibilities of public safety and security responders.
Personnel and facilities to provide security for prisons and detention facilities in the impacted area.	▪ Secure transportation for evacuation of prisoners. ▪ Trained personnel to provide security for relocation to other facilities. ▪ Temporary facilities to house inmates/detainees.

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4.5 Concept of Operations:

ESF-13 functions include but are not limited to:

- When activated, ESF-13 coordinates the implementation of authorities that are appropriated for the situation and may provide protection and security resources, planning assistance, technology support, and other technical assistance to support incident operations, consistent with agency authorities and resource availability;
- State resources could and would likely include members of the Oregon National Guard that the Governor calls into State service in a law enforcement, security, and/or public safety capacity;
- Through ESF-13, State and/or Federal resources could supplement County and local resources when requested or required, as appropriate, and are integrated into the incident command structure using National Incident Management System principals and protocols;
- Coordinate with local law enforcement and emergency managers to provide law enforcement assets as needed;
- Providing for the protection of emergency responders and other workers operating in a high-threat environment;
- Providing specialized security assets such as traffic barriers, canine units, law enforcement personal protective gear, etc. to responders;
- Traffic and Crowd Control: Providing emergency protective services to address public safety and security requirements;
- Establish security for critical facilities and essential supplies if requested;
- Verify communications capability within Operational Areas;
- Mobilize and deploy available law enforcement assets to designated staging areas and ICPs in impacted areas;
- Coordinate with ESF-1 on transportation requirements of personnel and equipment;
- Provide disaster intelligence to include observation of damage to critical facilities;
- Coordinate with ESF-1 on transportation requirements for law enforcement personnel and equipment;
- Coordinate with ESF-2 to determine communication frequencies to coordinate with local law enforcement in the impacted areas.

5 Supporting Documents

- National Response Framework, ESF 13 – Public Safety and Security
- County ESF 13 Annexes

6 Appendices

None at this time.

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14

Cascadia Subduction Zone Catastrophic Annex

ESF 14 – Long-Term Community Recovery

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ESF 14. Long-Term Community Recovery

ESF 14 Tasked Agencies	
Primary Agencies	Oregon Business Development Department (OBDD) Oregon Emergency Management (OEM) Governors Recovery Planning Cell/Governors Recovery Cabinet
Supporting Agencies	Department of Administrative Services (DAS) Oregon Department of Agriculture (ODA) Oregon Housing and Community Services Department (OHCS) Department of Land Conservation and Development (DLCD) Department of Consumer and Business Services (DCBS)
Adjunct Agencies	

1 Purpose

ESF 14 provides a framework for the State of Oregon support to local, regional and tribal governments, non-governmental organizations, and the private sector designed to enable community recovery from the long-term consequences of a major disaster or catastrophic incident.

This support consists of available programs and resources of Federal and State departments and agencies to enable community recovery, especially long-term community recovery, and to reduce or eliminate risk from future incidents, where feasible.

ESF 14 avoids duplication of programs and identifies gaps while providing support for long term recovery. Identifies key recovery priorities and funding.

2 Scope

- Volume I of the Oregon Emergency Operations Plan, titled “Preparedness and Mitigation” includes the plans and guidance necessary for the State to prepare to resist the effects of a major disaster or catastrophic incident. It includes the State disaster assessment, The State of Oregon Natural Hazard Mitigation Plan, Emergency Management Training and Exercise Program, and plans to mitigate or lessen the physical effects of a major disaster or catastrophic incident impacting the citizens of Oregon, critical infrastructure and the environment.
- Volume III of the Oregon Emergency Operations Plan, titled “Relief and Recovery” gives State guidance, process, and rules for assisting local, regional and tribal governments, non-governmental organizations, and the private sector with short- and long-term recovery from the effects of a major disaster or catastrophic event.

ESF 14. Long-Term Community Recovery

3 Roles and Responsibilities

3.1 Primary Agencies

3.1.1 Oregon Emergency Management

- Participate with Federal, State, Tribal and Local partners to conduct damage assessments. Identify and facilitate availability and use of recovery funding. Provide technical assistance for community recovery and planning support;
- Provides technical assistance in community, tribal, and State planning; recovery and mitigation grant and insurance programs; outreach, public education, and community involvement in recovery planning.

3.1.2 Oregon Business Development Department

- Provides economic and community development and cultural enhancement throughout the State, and administers programs that assist businesses, communities and people;
- Works to create, retain, expand and attract businesses that provide a sustainable living wage to Oregonians;
- OBDD's Infrastructure Finance Authority Board administers State and federal programs that provide funding to assist communities working toward long-term recovery following a disaster that impacts Oregon businesses continuity, and communities' ability to provide the necessary infrastructure to comply with the federal and State safe drinking water act and clean water act.

3.1.3 Governor's Recovery Planning Cell (RPC) / Governor's Recovery Cabinet (GRC)

- Direct emergency recovery in times of disaster by providing leadership in coordinating private and governmental sector emergency recovery efforts;
- Comprised of emergency recovery advisors and State agency leadership.

3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for additional DAS CSZ information

- Coordinate resource support assistance to assist with long term recovery as needed;
- Provide support by locating, purchasing and coordinating delivery of resources necessary during or after an incident in the State of Oregon which requires a coordinated State response.

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3.2.2 Oregon Department of Agriculture

See ESF-11 for more ODA CSZ information

- Advises the Governor on matters pertaining to the safety and conservation of agricultural resources;
- Coordinate with State and local agencies to establish a new normal operating procedure in long term quality assurance of:
 - Food safety
 - Commodity inspections
 - Animal health
 - Confined animal feeding operations
 - Weights and Measures department
 - Water quality
- Provides guidance and assistance to local jurisdictions for response to disasters that involve domestic animals;
- License and inspect all facets of the food processing and distribution system, except restaurants, to ensure that food is safe for distribution and consumption. This includes shellfish harvesting, dairy, retail grocers, bakeries, non-alcoholic beverages, custom meat, eggs, warehouses and food manufacturing. ODA coordinates with the State Health Officer on milk and other food products in commerce and works closely with the Oregon Public Health Division (PHD) in response to all food emergencies;
- Conserve, protect, and develop natural resources on public and private lands. Primary program areas include: water quality, confined animal feeding operations, smoke management, land use, and Soil and Water Conservation Districts;
- Pesticide Analytical and Response Center (PARC) functions as a clearinghouse for information on alleged and actual health and environmental incidents and reports its findings. ODA investigates these incidents and reports its findings;
- The Plant Division works to exclude, detect, and control or eradicate serious insect pests and plant diseases.

3.2.3 Housing and Community Services Department

See ESF-6 for more OHCS CSZ information

- Provides financial and program support to create and preserve opportunities for quality, affordable housing and supportive services for moderate, low, and very-low income Oregonians;
- Can assist in locating vacancies in housing following a disaster where housing is an issue. OHCS can provide financing programs and certain grant funds relevant to housing during a long-term recovery process;
- OHCS provides funding to Community Actions Teams (CATs) so they are able to work in the community;
- OCS works in cooperation with DLCD, who can direct the waiver of certain rules and regulations (e.g. allow development outside an urban growth boundary).

ESF 14. Long-Term Community Recovery

3.2.4 Department of Land Conservation and Development

- Administers Oregon's Statewide land-use planning program and Oregon's federally approved coastal-management program. It also administers the National Flood Insurance Program in Oregon;
- Coordinate efforts to streamline or alter permitting, and land use development approval process to meet long term recovery needs.

Assets

- The primary DLCD office is located in the State Agriculture Building in Salem. Smaller offices are located in Portland, Newport and Bend. The Newport office has a staff of two-three people and is located in the tsunami inundation zone;
- DLCD has two cars available (one gas powered, the other CNG);
- There are mobile tablets at their disposal for information collection and GIS data gathering;
- DLCD has Economic Development Specialists that can provide technical assistance post-quake on land use planning at the local level and development assistance for compatibility with Oregon's Statewide Planning Goals.

Capabilities

- Can provide local community zoning, planning and development information;
- Provide information on areas suitable for development;
- DLCD has at their disposal a State floodplain coordinator with access to NFIP flood maps and can provide intelligence on flooding issues;
- DLCD can provide GIS mapping capability and data collection;
- DLCD can provide damage assessment training to approximately 50-100 people per day. One staff member is able to do this training;
- When requested, DLCD can provide the State ECC a liaison.

Likely Mission Tasks

- Provide GIS mapping capability and data collection;
- Train State agency personnel and local communities on damage assessment;
- Provide information on potential post-event flooding issues for operational planning, response and recovery;
- Can provide land use planning assistance to communities as they recover;
- Can provide expertise on post-event economic development and recovery;
- DLCD liaises and assists federal ESF 14 recovery teams;
- Serves on and provides Governors Recovery Cabinet with information regarding Oregon Statewide land use planning issues;
- Work with FEMA post-catastrophic planning after DLCD requests assistance;
- Provide information on what parcels of land are suitable for development, and which lands cannot be developed.

ESF 14. Long-Term Community Recovery

Catastrophic Event operational challenges

- DLCD has no communications capabilities outside of telephone and internet;
- Possible need to waive Statewide planning requirements in an emergency;
- No formal liaison with other agencies dealing with land use planning issues (DSL, DEQ);
- Challenge of post-event legal issues regarding land use policies.

Support needed immediately after a catastrophic event

- DLCD has limited staff qualified to provide floodplain information and give damage assessment training. They would need additional personnel almost immediately;
- Communications would need to be established immediately;
- DLCD has a few Economic Development Specialists that can help with recovery planning, if needed. They can provide technical assistance post-quake on land use, urban growth boundaries (relevant to relocating or rebuilding damaged facilities, et cetera). As long term recovery ramps up, there may be a personnel shortage.

3.2.5 Department of Consumer and Business Services

Provides coordinating assistance with infrastructure recovery for businesses dealing with financial services, insurance, workers' compensation and worker safety health protection issues.

DCBS Divisions

Oregon OSHA: Coordinates and performs the actions identified within the Worker Safety & Health Support Annex of the National Response Framework, or State equivalent; provides occupational safety and health technical support to other State and local entities; assesses responder safety and health resource needs, e.g., OSHA on-site assistance, incident-specific personal protective equipment protocols, training, safety and health monitoring; investigates workplace fatalities, major accidents, and safety and health complaints.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Respond to request to send liaison with State ECC.

Assets

- OR OSHA has field offices around State;
 - Location of field offices: Medford, Eugene, Salem, Bend, Portland, Pendleton.
 - Pendleton is a satellite office.
 - Occupational health lab is up in Portland.
- Vehicles for staff are located at each field office;
- Standard communication assets (phones, cell phones, internet);
- Uses the DCBS data network administered by DAS. OSHA would be dependent on DAS for restoration of computer access.

ESF 14. Long-Term Community Recovery

Capabilities

- OR OSHA serves as a regulatory agency with Statewide authority over public and private sector operations and work for worker safety;
- Works with other State departments to answer questions on worker safety and health;
- Can undertake site-specific occupational safety and health plan development and implementation, and ensuring that plans are coordinated and consistent among multiple sites, as appropriate;
- Provides technical assistance (answering questions, distributing information, etc.) regarding worker safety and health;
- Ensure out-of-State workers assisting meet Oregon OR OSHA rules and requirements;
- Education and training for responders and workers on dealing with hazards (asbestos, chemicals);
- If there is a worker safety and health issue or complaint, OR OSHA may be tasked with implementing worker safety;
- OR OSHA identifies what is needed for PPE (OSHA tells them what they need to get and have to be compliant in the field, and do jobs safely);
- Can assist with coordination of supplying PPE, but they don't do the actual purchase or supplying of PPE;
- Liaises with Federal OSHA to ensure worker health and safety;
- Mechanisms are already in place to work with Fed OSHA in a scenario like this. In context of disaster recovery, Fed OSHA will work with FEMA on National level, assisting Oregon OSHA. This would go back through ECC for tracking;
- Coordinates communication with labor unions, contractors, and other organizations regarding responder safety and health issues; OR-OSHA has a large inventory of sampling equipment for a variety of substances and hazards, and staff trained on their use;
- Can coordinate with Federal OSHA to provide specialized response radiological team, for example (or health response team or structural response team – engineer on the Federal OSHA level). However, they would be using that resource for their purposes (example: high-rise tower crane collapse which has structural questions and how those big systems work and how/why it failed).

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;
- Unknown if OSHA building has a generator or back up power for their facility;
- OR OSHA communications are dependent on telecommunications and internet;
- Loss of computer and data systems would impact OR OSHA operations significantly;
- Would require immediate personnel assistance from outside of the State;

ESF 14. Long-Term Community Recovery

- Would require communication equipment and most likely vehicles, fuel or transport to work locations;
- No private sector contractors that could help with OR OSHA regulatory work, which would be bulk of post-quake work;
 - Would need to turn to Federal OSHA for assistance, if necessary.
- OR OSHA would be unable to issue citations because those are computer-dependent.

Building Codes Division: Ensures safe building construction by adopting and administering uniform Statewide building codes; provides building code and rule interpretation; assists local government building departments; enforces license, code and permit requirements; certifies inspectors and licensing trade professionals.

Priorities

- All DCBS divisions would need to assess their own operational needs and account for personnel;
- Upon request, send liaison to State ECC.

Assets

- The primary facility for the BCD is in West Salem;
- BCD has field offices in Pendleton and in Coquille (could be impacted by tsunami). Approximately four or five personnel at each location. BCD could reassign some of our field office staff for a short time to supplement staffing. BCD has no ability to house or care for those staff however;
- BCD Inspectors have agency vehicles;
- BCD (in isolated cases) has IGAs with jurisdictions where they provide services on BCD's behalf; Example: In Klamath County, someone is doing prefabricated construction and shipping those around the State of Oregon. To avoid having to send BCD inspectors down there to inspect every shipment, the local licensing department in Klamath County does it (via IGA) so State BCD doesn't have to travel there.
- Uses the DCBS data network administered by DAS. BCD would be dependent on DAS for restoration of computer access.

Capabilities

- BCD ensures safe building construction by adopting and administering uniform Statewide building codes;
- Enforcing license, code and permit requirements;
- Certifying inspectors and licensing trade professionals;
- Providing building code and rule interpretation;
- Assisting local government building departments;
- Can provide assistance and expertise on the licensing of electrical, plumbing, elevator and boiler contractors;

ESF 14. Long-Term Community Recovery

- Maintain and provide a current list of building inspectors and design professionals that have been certified in ATC-20 post-earthquake inspection procedures. ATC-20 is a methodology developed by the Applied Technology Council to:
 - Evaluate the extent of damage to structures after an earthquake
 - Placard buildings to inform owners, occupants and the public if a building is safe to enter and occupy
- Assists in long term recovery through the normal licensing and permitting process once operations are re-established.

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;
- BCD has no generator or back up power for their facility;
- BCD communications is dependent on telecommunications and internet;
- Loss of computer and data systems would impact BCD's operations significantly;
- With limited exception, BCD's list of ATC-20 post-earthquake inspectors identifies only Oregon residents that have completed ATC training. A catastrophic seismic event would likely require additional inspectors from outside the State;
- BCD operates under ORS 455 - Building Codes Division. It's uncertain how flexible BCD could be on permitting or licensing post-quake. Emergency response may require Governor's order to waive or relax requirements.
 - There are some provisions in the Code for emergency repairs -within 72 hours as written, too small a window of time for this scenario.
 - Past history, in those cases is that the repairs are done and permits can be obtained after the fact.
 - Generally speaking, BCD is not able to ignore the licensing requirements in Oregon.
- Limited engineering capabilities in BCD (one staff member), it is unlikely that they would be able to assist with structural engineering assessment.

Insurance Division: The Insurance Division protects the public by ensuring the financial soundness of insurers, the availability and affordability of insurance and fair treatment of policyholders while maintaining a positive business climate.

Priorities

- Account for personnel;
- Assess building for damage;
- Enact COOP, if needed;
- Assist insured Oregonians who need help (act as a liaison between insurance companies and their consumers).

Post-quake, insurance customers have many questions and are uncertain on what to do. Insurance Division can answer these questions and provide technical assistance.

ESF 14. Long-Term Community Recovery

Assets

- The primary facility for the Insurance Division is in Salem;
- The Division can operate from a remote location and possibly telecommute as necessary. Most of what they do does not require on-site presence. However, they are heavily reliant on internet and communications;
- A few office vehicles;
- Insurance Division has a COOP plan.

Capabilities

- DCBS Insurance Division provides technical assistance to the insured to deal with getting resolution with their insurance companies to rebuild their homes or facilities. They can also provide technical assistance on how coverage works, where shortages may arise, and other insurance-specific questions that consumers will have after a catastrophic event;
- Deploys teams to affected areas to assist the public to assist with insurance questions and provide technical assistance;
- The OROSHA ECC representative acts as a liaison between the State ECC and the Insurance Division of DCBS;
- Accompany FEMA personnel to assist consumers with the insurance process;
- The Insurance Division routinely informs the public by website, presentations and via email and phone. They can do this on site when necessary;
- Coordinate media (Insurance Division has a PIO, but not part of the JIC team with OEM, due to workload and other priorities following a catastrophic event);
- Public education on insurance coverage and process;
- Coordinates with the FEMA National Flood Insurance Program (NFIP) and refers those with flooding issues to the NFIP. (Tsunami is covered under the NFIP);
- The Insurance Division of DCBS provides emergency licenses for out-of-State adjusters to operate and do business while in Oregon. Oregon law does require a license for out-of-State adjusters to operate here;
- The Insurance Division (Oregon Insurance Commissioner) has the power (without Governor approval) to make directives to insurers regarding certain emergency measures that will be complied with in order to give consumers relief from immediate concerns about payment of premiums;
 - For 45 days, extensions can be granted – you cannot cancel or not renew an insured due to nonpayment, et cetera. The insurance company cannot terminate coverage on auto, home life, health – etc., in times of emergency.
- The Insurance Division does not handle insurance fraud. There is no insurance fraud law, per se, in Oregon;
 - Fraud cases are referred to private sector companies.
 - The Insurance Division refers fraud complaints to the National Insurance Crime Bureau toll free phone number to report fraud.

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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;
- The Insurance Division has no generator or back up power for their facility;
- Insurance Division communications is dependent on telecommunications and internet;
- Loss of computer and data systems would impact Insurance Division operations significantly;
- If Insurance Division trained staff are unable to perform their responsibilities, trained personnel would be needed from outside the State;
 - No existing arrangements or MOUs to do so.

Worker's Compensation Division

- Provide technical assistance regarding worker's compensation issues; and
- Assist public in worker's compensation process.

DCBS organizes technical assistance resources (such as call centers) as they relate to the various DCBS functions.

4 Concept of Operations

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Recovery assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

After a formal declaration of emergency, the Governor will determine whether to activate the RPC based on the nature of the declared emergency.

RPC will be directed by the Governor's Emergency Preparedness Advisor (EPA), appointed by the Governor from among the Governor's staff.

Once activated, the RPC is recognized by FEMA as a State agency for the duration of the initial phases of the crisis, for purposes of requesting federal reimbursement.

The Governors Recovery Cabinet (GRC) will be established to coordinate the next phases of the recovery efforts, after the initial response phase is complete. The GRC will be comprised of Statewide leadership, legislative leadership, federal and local leadership, and others as required by the specific circumstances. The GRC will exist until the Governor is satisfied the crisis has passed.

Upon finding that circumstances require extraordinary levels of assistance for emergency recovery, the governor may establish Economic Recovery Zones within specified, high-impact recovery areas.

ESF 14. Long-Term Community Recovery

5 Supporting Documents

- National Response Framework, ESF 14 – Long-Term Community Recovery
- State ESF 14 Annexes
- Executive Order NO. 08-20

6 Appendices

None at this time.

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Cascadia Subduction Zone Catastrophic Annex

ESF 15 – External Affairs

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ESF 15 Tasked Agencies	
Primary Agencies	Governor's Office Oregon Emergency Management (OEM)
Supporting Agencies	Department of Administrative Services (DAS) Oregon Military Department (OMD) Oregon Department of Human Services (DHS) Oregon Health Authority (OHA) Department of State Lands (DSL) Office of the State Fire Marshal (OSFM) Oregon Department of Transportation (ODOT) Oregon State Police (OSP)
Adjunct Agencies	Red Cross

1 Purpose

- Ensure that sufficient State assets are deployed in a catastrophic event to provide accurate, coordinated, and timely information to affected governments, legislators, the media, the private sector, and the local populace.
- To collect, analyze, and disseminate critical information from Federal, State, local, regional, and tribal agencies, non-governmental organizations, commercial and private sector organizations to facilitate overall mitigation, response, and recovery actions associated with the emergency operations in the State.

2 Scope

- Coordinates the information and planning functions of the Emergency Coordination Center (ECC) when activated.
- Performs the information and reporting function of the ECC and provides a macro-view of the disaster or emergency situation.

3 Roles and Responsibilities

3.1 Primary Agencies

- Upon activation of this plan, the Public Information Officer (PIO) of the designated lead State agency for the emergency or disaster becomes the lead State PIO for purposes of this plan and the procedures it specifies.
- At any time, the Director of OEM or the Governor may appoint a replacement lead State PIO.
- The directors of State agencies must ensure that their emergency operations plans and public affairs officers and other information officers are National Incident Management System (NIMS) compliant.
- In the event of an emergency, each responding State agency is responsible for providing subject matter experts, as appropriate, to assist the Public Information

Team (PIT) in developing informational materials that are accurate and provide the public with wanted facts. This person may be the agency liaison officer in the Oregon ECC.

- In the event of an emergency or disaster, each responding State agency is responsible for notification of its respective partners and stakeholders.

3.1.1 Governor's Office

- The Governor's office mobilizes the PIOs of State agencies to staff and support the Joint Information System (JIS) or a Joint Information Center (JIC) when a public emergency or disaster occurs.
- Governor's Office Social Media:
- Website - <http://governor.oregon.gov/> (Links are located there to the Governor's Twitter, Facebook, YouTube and Flickr social media accounts).

3.1.2 Oregon Emergency Management

- The mission and purpose of OEM is to establish, maintain, and implement an emergency services system on behalf of the Governor. Through the Oregon Emergency Response System (OERS), OEM provides a single point of contact that local governments and industries can use to obtain 24-hour-a-day assistance from any State emergency-response agency.
- At the direction of the Governor's Office, the OEM PIO and the lead agency PIO use the call-down procedure in Appendix C of the Public Information Manual to notify key State agency PIOs of the emergency and activate additional staff, as warranted by the scale of the emergency and the demand for public information.
- Interact with Federal, Tribal, State and Local partners to facilitate a process of information sharing; inform elected and appointed officials on response efforts, protocols and recovery programs; and disseminate information with municipal and county associations and tribal governments.
- OEM will notify the DAS public affairs manager of training and exercise opportunities. The DAS public affairs manager will, in turn, notify the State Communications Council.
- OEM Social Media:
 - Blog - <http://oem-oregon.blogspot.com/>
 - Twitter - @OregonOEM

3.2 Support Agencies

3.2.1 Department of Administrative Services

See ESF-7 for additional DAS CSZ information

- When infrastructure becomes available, DAS will establish and maintain a crisis communication hotline the public can use to obtain essential emergency information when needed.

- DAS's Public Affairs Section will establish and maintain an "emergency information" feature on the Oregon.gov Website, which will provide updates and public advisories in the event of an emergency or major disaster. DAS will insert a link to this page on the Governor's Website.
- DAS's Public Affairs Section will maintain a database of up-to-date contact information for all State agency PIOs.
- When funding becomes available, DAS's Public Affairs Section will establish and maintain a secure Virtual JIC.

3.2.2 Oregon Military Department

- OMD's Public Affairs Office in Salem is responsible for providing information to the public concerning activities of the Oregon National Guard and responding to requests for information from the public and private sector.
- OMD's Public Affairs Office will provide support to OEM's PIT in the State ECC or JIC, if established.
- OMD has trained liaison officers (LNOs), in Salem with organic communications support (PACSTAR 3500 and go-kit enabling communication).
- OMD would be requesting additional LNOs to deal with a catastrophic event response to include a JET (Joint Enabling Team) and DART (Domestic All-Hazards Response Team) to assist with ESF-15 response.

3.2.3 Oregon Health Authority (OHA)

- OHA will allow the Health Alert Network (HAN) (also known as Oregon Health Network) to serve as a secure virtual JIC until the State can establish a shared State-level virtual JIC.
- In addition to the virtual JIC function, the HAN includes an alerting system which allows pre-identified PIOs from various State agencies to be quickly and efficiently contacted through their preferred and prioritized method. This includes telephone, pager, and email. The OHA will allow OEM to utilize the HAN's alerting system to notify and give direction to appropriate PIO's regarding an emergency or disaster.
- OHA Social Media:
 - Facebook - www.facebook.com/OregonHealthAuthority
 - Twitter - @OHAOregon

3.2.4 Department of State Lands

- The Department of State Lands has a Public Information Officer on staff which will report to the ECC. The PIO is responsible for coordinating with JIC staff and other agency PIO's to develop public messaging as necessary.

3.2.5 Office of the State Fire Marshal

- The Oregon State Fire Marshal has a Public Information Officer on staff which will report to the ECC and AOC. The PIO is responsible for coordinating with JIC staff and other agency PIO's to develop Public Service Announcements centering on safety. Will interface with local media outlets to provide safety information for search and rescue and hazardous materials incidents as needed.
- Can provide PSA's for gas related protective measures such as gas leaks, or the odor of gas in an area.

3.2.6 Oregon Department of Transportation

See ESF-1 for more ODOT CSZ information

Assets

- Public Information Officers capable of supporting the Joint Information Center;
- Variable, programmable message signs;
- Trip-check;
- ODOT has a HAM radio network;
- Can utilize the EAS;
- ODOT Social Media:
 - Facebook - www.facebook.com/OregonDOT
 - Twitter - @oregondot

Capabilities

- Provide reports on the status of transportation systems and ODOT response activities;
- Provide ODOT public affairs personnel to work in a JIS;
- In a partnership support function, ODOT PIO will work directly with the Joint Information Center at the ECC;
- Regional PIO's and district PIO's have the ability to disseminate information to local government agencies;
- Respond to requests for messaging on variable message signs which can be programmed on site or remotely.

Operational Challenges

- For some social messaging outlets such as Internet, Face book, Twitter – may be compromised due to the event;
- Transmission capabilities may be affected due to down repeaters and microwaves.

3.2.7 Oregon State Police

See ESF-13 for more OSP CSZ information

Assets

- Very experienced PIO will respond to the Joint Information Center;

- Has access to ODOT reader boards.

Capabilities

- Provide information, as appropriate, to the public concerning the disaster which requires the participation of OSP, including:
 - PSA's regarding evacuation needs and safety.
 - PSA's regarding safe routes when they become available.
 - Provide information on safety and security issues for public messaging.
 - Provide assistance with public safety in evacuation messaging.
- Coordinate with the State and ODOT PIO for effective messaging as well as alternate messaging capabilities;
- Troopers are capable of performing welfare checks if/when they are available to do so.

3.3 Adjunct Agencies

3.3.1 American Red Cross

The American Red Cross maintains a Public Information Team. The teams interface with the Joint Information Center, local, State and national media to ensure that accurate information about sheltering and services is disseminated to survivors in the impacted areas. Messaging and service information is mission critical to reach out to the impacted communities. Red Cross provides the 'Safe and Well' system for anyone who wishes to place their name in the data base for friends and relatives who would be inquiring about their safety. This is a voluntary program available to disaster survivors. The 'Safe and Well' program and Red Cross feeding operations can be extended for those who wish to shelter in place or in neighborhood camps.

- Red Cross Social Media:
 - Facebook - <https://www.facebook.com/RedCrossPDX>
 - Twitter - @RedCrossPDX
 - Blog- <http://redcrosspdx.blogspot.com/>

4 Concept of Operations

4.1 General

OEM will coordinate all requests for assistance and communicate with the State agencies to identify the appropriate action and State resources to be used. Once Public Information assets have been identified to meet the request, OEM will create an action to the specific State agencies to accomplish the task.

The intent of this annex is to establish and maintain an accessible process to help public agencies release timely emergency information that is accurate, consistent and easy to understand. Such information includes updates and reports about public agencies'

response to an emergency or disaster and any recovery efforts that are underway. The audience includes the news media, the public at large, local governments, tribal entities, federal agencies and State workers.

When this event occurs, the public will need timely, accurate, credible and coordinated information in order to react appropriately. State agencies have a responsibility to issue information that achieves the following goals:

- Help prevent loss of life and property.
- Warn and inform people in danger about the threat, and tell them what they can do to reduce the risk.
- Inform the public on where to receive needed resources and services.

4.2 Public Information Team

To protect the public's health and safety in the event of an emergency or disaster, public agencies must issue accurate and timely information through the news media. They must rapidly and effectively communicate the facts of what happened. They must also reveal what the government will do about the emergency or disaster, and describe what citizens must do to protect themselves.

4.2.1 Composition of the Public Information Team

The PIT utilizes PIOs from various State agencies. The level of participation depends on the nature and scope of the emergency or disaster.

The primary agencies to be represented on the PIT include:

Governor's office	OEM	DAS
ODOT	DEQ	OMD
Oregon State Police (OSP) ▪ OSFM ▪ Law Enforcement Data Systems - Criminal Justice Information Services (CJIS) ▪ Office of State Medical Examiner (OSME)	DHS	OHA

Other Agencies: Due to the severity of this event, it is likely that other agencies will need to participate in the PIT. These include, but are not limited to:

Oregon Department of Agriculture (ODA)	Department of Aviation (AERO)	Department of Consumer and Business Services (DCBS)
Building Codes Division (BCD)	Insurance Division (INS)	Oregon Occupational Safety and Health Division (OR-OSHA)
Department of Corrections (DOC)	Oregon Economic and Community Development Department (OECDD)	Department of Energy (DOE)
Oregon Department of Fish and Wildlife (ODFW)	Oregon Department of Forestry (ODF)	Department of Geology and Mineral Industries (DOGAMI)
Department of Housing and Community Services (OHCS)	Department of Land Conservation and Development (DLCD)	Oregon Liquor Control Commission (OLCC)
Oregon Parks and Recreation Department (OPRD)	Oregon Poison Center (OPC)	Travel Oregon
Public Utility Commission (PUC)	Department of State Lands (DSL)	Water Resources Department (WRD)
American Red Cross (ARC)		Civil Air Patrol (CAP)

4.2.2 Deployment of the Public Information Team

- The decision to deploy State public information resources to help with emergencies or disasters affecting other State agencies, local agencies, regional agencies or other States lies with the Governor's office, the lead State agency PIO, and OEM.
- The lead State PIO and OEM PIO, in coordination with the Governor's Communication Director or representative, are responsible for determining if and when the PIT needs additional staff. If the need arises, the lead State PIO and the OEM PIO will use the call-down procedure in Appendix C of the Public Information Manual to activate additional staff. Appendix B of the Public Information Manual includes State PIO and other PIO contact information that can be used when requesting State and local public information resources.
- PIOs from affected jurisdictions will compile and disseminate information under a JIS. The PIO from each jurisdiction will coordinate information that comes from his or her respective emergency operations center. Such coordination includes exchanging news releases, advising one another of media inquiries, and sharing pertinent information.

- The JIS will operate from the onset of any emergency or disaster, and will continue operating as long as the State continues its response. Operations may continue through periods of recovery.
- When activated, the JIC becomes the primary location for facilitating the operations of the JIS. The JIC gives the media a single source of reliable information, a place to call for authoritative updates, attend interviews, and receive briefings. Procedures for establishing a JIC appear in Section VI below.
- The PIT may establish itself in the ECC, in the lead State agency Emergency Operations Center, or in a JIC depending on the nature and extent of the emergency or disaster.
- The PIT provides information about emergency conditions, actions being taken to respond to the emergency or disaster, and any instructions or warnings to the public. The PIT will perform the following functions:
- Conduct liaison between the decision-makers in the ECC and the news media.
- Provide timely, accurate, coordinated information to OEM staff, the Governor's communications director, the public, the news media, partners, stakeholders, and other interested parties. Such information includes the following:

Nature and extent of the emergency or disaster

- Areas of the State that have endured the effects of the emergency or disaster, and areas that may sustain damage in the future
 - Actions the public should take to protect themselves
 - Activities that government has initiated, or plans to initiate, in response to the emergency or disaster
- Prepare and maintain electronic copies of press releases and a log of public information activities.
 - Plan and prepare announcements, interviews, question-and-answer sessions, video footage, and other services for use by the printed news media, broadcast news media and internet news providers.
 - Brief the news media as new information becomes available. Schedule briefings on a regular basis (at designated times) and when announcements of "breaking news" are appropriate.
 - Monitor national, regional, and local news broadcasts to assess the accuracy of news reports. If inaccuracies occur, notify decision-makers in the ECC immediately, and take appropriate measures to provide corrected information to the news media.
 - Counter unfounded rumors with the timely release of factual information to the public.
 - Develop supplemental information, such as newspaper inserts and backgrounders, that provide detailed information about the State's efforts to protect the public, or any other facts or advice the public may find useful.

- Whenever possible, maintain all public information news releases, briefing sheets, talking points, backgrounders and supplemental materials in electronic format. After the emergency has ended, collect public information records and deliver them to the manager of the ECC.
- During an activation of the ECC, the Governor's communications director will provide direction to the PIT as part of the Executive Management Section.

4.2.3 Information and Message Development

During an emergency, the team focuses on delivering the facts of the event, as well as information about public health and safety, the activities involving response and recovery, disaster preparedness, and other directives from government. A key part of the job is to assure the public that authorities are executing coordinated response plans.

- The following sections of the Public Information Manual contain guidance for message development for use by the PIT:
 - Appendix E - Checklists and Forms
 - Appendix F - Hazards & Preparation Messages (examples of news releases and emergency preparedness information for specific disasters and emergencies)
 - Appendix G - Risk Communications Guide
- Prior to release of any message to the news media and other government representatives during an emergency or disaster, the PIT must secure approval from the following:
 - Lead State PIO
 - Subject matter expert (as appropriate)
 - One of the following Senior Management Officials with OEM:
 - OEM Director
 - ECC Manager
 - OEM Operations Manager
 - State Coordinating Officer (in the event that the President of the United States declares an emergency or disaster)
- During an emergency or disaster, the PIT will send all messages to the Governor's communications director.
- In disseminating information to the public, the PIT will use the full array of communications systems and digital lists of news media contacts (email addresses of newsrooms, wire services and reporters). See Public Information Manual Appendix D - Media Contacts.
- Upon re-establishment of service, DAS will provide a toll-free "hotline" that enables callers to learn critical facts and updates, including what residents can do to protect themselves and their property. The hotline will also notify callers of other important sources of information, including Web sites. The hotline will be located at OEM, the JIC, or other designated location.

4.2.4 Staffing the Public Information Team

- The roles and responsibilities of each member of the PIT appear in Appendix A - PIT/JIC Job Descriptions of the Public Information Manual.
- If Oregon requires help with public information from other States, the PIT will use the interstate Emergency Management Assistance Compact (EMAC) process. The EMAC Coordinator in the State ECC will process the EMAC request.
- The Governor and the directors of State agencies have discretion to deploy Oregon's public information resources to help with emergencies or disasters that affect other states, local governments or regional agencies.

4.3 Joint Information Center**4.3.1 Function**

- Depending on the extent of an emergency or disaster, dissemination of information to the public may occur through a JIS that begins when an emergency occurs and ends when the State's response is complete. When established, the JIC becomes the primary location for facilitating the JIS and providing the news media with a single, reliable source of information. A JIC may be established under the following circumstances:
 - The scope of the emergency or disaster exceeds an individual agency's ability to respond effectively.
 - The response to the emergency or disaster requires the involvement of more than one State agency.
 - The lead State agency determines that a JIC is needed.
- Once established, the JIC becomes the physical facility in which public affairs professionals work together to perform public affairs functions on behalf of the agencies involved in responding to the crisis. These professionals issue information about the emergency, answer questions from the news media, and coordinate responses to the public's need for information about such matters as preparedness, response, recovery, mitigation and prevention of harm.
- A JIC may include representatives from the federal government, the State of Oregon, neighboring states, local government, and the private sector. The JIC will coordinate and release all information to the public on behalf of the State.
- Once a JIC has been established, the PIT operating in the State's ECC will relocate to the JIC. One ECC/JIC PIO liaison will continue to work in the ECC and coordinate information between the ECC and the JIC.
- Since the ECC will be closed to the media, the JIC also provides a location where the Governor, the lead State PIO, and others can meet with the media to hold news conferences and briefings.

4.3.2 Responsibilities

- The JIC must gather information from as many reliable sources as necessary to achieve an understanding of the emergency and its magnitude. When information comes to the JIC, the staff must collect and organize it to make it useful. This function requires skilled, experienced professionals who can quickly recognize the utility of gathered facts and present them in a way that reporters and news editors find helpful.
- Information comes to the JIC from many sources. The JIC staff must analyze the information, verify its reliability, and decide which items to release to internal and external audiences, a process that will require much of the staff's time. Throughout the process, those staffers who analyze incoming information must continuously share it with staffers who are responsible for producing news releases, briefing materials, backgrounders, tip sheets and other informational materials.
- The public needs information in a useable form, organized by category, priority and value. In the early stages of an emergency or disaster, the JIC staff may employ a "one sheet" technique, presenting only critical information in topical subheads and bullets that fit on a single sheet of paper. The staff may also employ all the traditional techniques, utilizing maps, photos, charts and videos to highlight and emphasize important points.
- A quick but thorough review of all information to be released is an essential part of the information management process. Reviewers should look for inconsistencies, inaccuracies, clarity and completeness. Agencies with an official response role in the emergency will quickly respond with any serious concerns or changes.
- JIC staff must use every means available to provide information to those who need it, using the proper format. Dissemination also must serve internal audiences involved in responding to the emergency or disaster, as well as external audiences.
- Proper documentation of public information is mandatory under the rules that govern the Incident Command System (ICS) and NIMS. In order to resolve a miscommunication, disputes or lawsuits, documentation of government decisions and activities is essential. Each supervisor in the JIC must maintain a personal log that records the dates and times when significant actions occurred during his or her shift, with appropriate notations that describe the action (including references to actual press releases, backgrounders and other materials released to the public and to other agencies). Every JIC manager should provide the means for filing such information at the close of each shift. Documentation forms are available in Appendix E of the Public Information Manual.
- Monitoring the media is a critical function of the JIC. Staff members will watch and listen for issues and inaccuracies that could cause problems for officials and the public in affected areas.

4.3.3 Location of the Joint Information Center

- The primary location of the JIC, if activated, will be Room 114 in the Anderson Readiness Center at 3225 State Street in Salem, Oregon, or as designated by the Director of OEM.
- A JIC may also locate close to the area affected by the emergency or disaster, or in some other suitable site that the lead State agency designates.
- If an emergency or disaster develops that threatens or compromises the primary JIC site, the lead State agency or the Director of OEM may move the JIC to another location.
- The equipment needs of a JIC appear in Appendix E - Checklists and Forms of the Public Information Manual, as do those of a portable or mobile JIC.

4.3.4 Virtual Joint Information Center and Website

- During an emergency or disaster, assembling key JIC staff at the appropriate location may require many hours. A “virtual” JIC may serve the public’s expectation for instant news by collecting information from responders across a wide area until responders and JIC staff can assemble in one location.
 - A “virtual” JIC is a crucial part of the JIS. It allows responding PIOs in many locations to post and access the latest verified information from a single secure Web site. During an emergency or disaster, assembling key PIOs to staff a JIC may require many hours. In addition to providing crucial information throughout the emergency, the virtual JIC can be used to share information before a physical JIC has been established.
 - The operation of a virtual JIC allows interaction among incident-management sites, and ensures delivery of consistent, timely information to those who need it.
 - A virtual JIC collects information from many sources and assembles it in one place (e.g., a Web site). Multiple State agencies and county and city governments may contribute information through a virtual JIC.
 - During an emergency or disaster, authorities can feed critical information from the affected areas to the HAN, which JIC staff may access for message development and distribution. The DAS Public Affairs Section will then place selected information from the HAN on the State Oregon.gov Web site, which is accessible to the public. In the long term, the State will work toward establishing a secure, password-protected site that can serve as a virtual JIC for use during emergencies.
 - Message development and approval will occur according to Section E, below.
 - The virtual JIC will provide templates, key messages to and from stakeholders, fact sheets, and frequently asked questions (which also appear in Appendix E of the Public Information Manual). The JIC staff will develop these model materials, messages, and templates under the guidance of the Governor’s office and the lead State PIO.

- The Governor's office and participating agencies, jurisdictions and municipalities will link to the public site to ensure continuity of information about the emergency or disaster.
- The HAN (also referred to as Oregon Health Alert Network), with approval of OHA, will temporarily serve as the secure virtual JIC until the State can develop a shared virtual JIC for emergency management use at every level of government.

4.3.5 Information and Message Development

The JIC serves as a single, reliable point-of-contact for the news media and the public. The JIC will also give emergency response agencies opportunities to ensure that the public information and messages developed by the JIC are complete and consistent.

- The JIC staff will develop messages with the guidance of the following appendices included in the Public Information Manual:
 - Appendix E - Checklists and Forms
 - Appendix F - Hazards & Preparedness Messages (examples of news releases and emergency preparedness information for specific disasters and emergencies)
 - Appendix G - Risk Communications Guide
- The PIT located at the State ECC will send its news releases and any other informational materials it develops to the JIC by fax, telephone or email.
- Before releasing any information to representatives of emergency management agencies or the news media, the JIC's PIT will obtain review and approval from the following:
 - Lead State PIO
 - Subject matter expert
 - One of the following Senior Management Officials with OEM:
 - OEM Director
 - ECC Manager
 - OEM Operations Manager
 - State Coordinating Officer (in the event that the President of the United States declares an emergency or disaster)
- During an emergency or disaster, the PIT will send all messages to the Governor's communications director.
- State agencies that respond to the emergency may release information about their own roles in the response, but they must ensure that their information and messages are consistent with those issued by the JIC.
- During an emergency or disaster, the JIC will release its telephone numbers to the public through the news media, giving people a place to call for timely and accurate information.

4.3.6 Staffing the Joint Information Center

- The lead State agency will assign a qualified PIO to serve as JIC manager. The JIC manager will coordinate the activities of the JIC and its media center. The JIC manager may also ask technical staff from the ECC to participate in briefings in the JIC, addressing technical questions raised by reporters, members of the public, and other government officials.
- The specific roles and responsibilities of JIC members appear in Appendix A -PIT/JIC Job Descriptions of the Public Information Manual.
- Once a JIC is established, the PIT operating in the State's ECC will relocate to the JIC. One ECC/JIC PIO will continue to work in the ECC to coordinate information between the ECC and the JIC.
- If Oregon requires help with public information from other States, the interstate EMAC process will be used to request assistance. The EMAC Coordinator in the State ECC will process the EMAC request.
- The Governor and the directors of State agencies have discretion to deploy Oregon's public information resources to help with disasters that affect other states, local governments or regional agencies.

4.4 Training Requirements for Public Information Officers

- See State of Oregon EOP, ESF-15 for information.

4.5 Shortfalls and Requirements

SHORTFALLS	REQUIREMENTS
Alternate means to disseminate information to the public	▪ Mobile broadcast capability for severely impacted jurisdictions. ▪ Portable Radios for isolated communities. ▪ Capability to generate large quantities of printed material to communicate with isolated communities.
Ability to make information fully accessible to all survivors.	▪ Equipment and interpreters to support the Joint Information Coordination Center.
Coordinate unified messaging with respect to public safety and response operations	▪ Establish a Joint Information Coordination Center to support State and Regional messaging.

5 Supporting Documents

- National Response Framework, ESF 15 – External Affairs
- County ESF 15 Annexes
- State of Oregon Emergency Operations Plan, 2010
- Public Information Manual

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State of Oregon

Cascadia Subduction Zone

County Response Information Annex

Component Three of the Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan



Oregon Military Department,
Office of Emergency Management
3225 State Street
Salem, Oregon 97301
503-378-2911

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Preface

The purpose of this plan component is to provide record of Oregon's counties' unique operational concepts following a Cascadia Subduction Zone catastrophic earthquake and resultant tsunami.

This plan component was created through a series of discussions and interviews in each Oregon County. These discussions involved a wide variety of representatives including county and city emergency managers, police and fire responders, health care professionals, volunteers, private sector representatives, and others involved in the local response to this event.

This plan component is intended to outline each Oregon County's priorities, capabilities, general response assets, catastrophic event operational challenges and the support needed from outside of the State after the event.

Consultation with Oregon counties will occur and this document will be updated as needed to reflect changing capabilities, assets and understanding of the Cascadia Subduction Zone threat.

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1

Oregon Coastal Counties

CSZ Area 1, Oregon Coastal Counties

In the **coastal counties of Curry, Coos, Douglas, Lane, Lincoln, Tillamook and Clatsop**, being the closest area to the epicenter of the earthquake, extreme effects are to be expected. Shaking will be very severe and populated areas are subject to a massive tsunami within 15-30 minutes. Structures not built to modern codes are not expected to survive. Much of the coastal residential inventory is likely to be damaged or destroyed by the following tsunami which may travel more than a mile

inland in places. Tsunami waves are expected to begin arriving in about 30 minutes from the earthquake itself, leaving very little time for individuals to seek higher ground. Waves may continue periodically as aftershocks continue well past the initial quake.

Consequently, a relatively high fatality rate will be an additional impact. These counties are reached by a relatively small number of roads which all traverse hilly, landslide prone terrain and cross rivers with bridges that are not expected to survive. Access by road following the earthquake is likely to require a month or more of continuous effort by construction crews and engineers.

Coastal County shortfall expectations are:

- Electrical power will fail.
- Communications methods will largely fail.
- Fuel will be needed for response and for power generation. Propane will also be needed for some generators, cooking and heating.
- Normal response centers at police and fire stations will be severely disrupted.
- Travel in many areas will have to be by foot as roads will be broken, displaced, undermined, covered by debris or washed away.
- Isolated survivor communities in the coastal areas will likely be short on all supplies and those individuals exposed to the environment will have to be found and relocated to safe areas due to the severity of winter on the Oregon Coast.
- Large-scale shelter areas will have to be established on short notice. Large-scale evacuation of the surviving population is not logistically possible in the



1 Oregon Coastal Counties

short term. Self-evacuation from the region will not be practical for a month or more.

- Logistical support except from the sea will be very resource intensive.
- Health centers will be non-operational in the traditional sense. Some patients will require relocation and large number of injured will be treated by any reliable means – probably not to current standards of care.
- Pharmaceuticals will be in very short supply.
- Hasty sterilization such as by bleach immersion may be the only means available.
- Health response centers will have to be supported at multiple locations along the coast including offshore platforms.
- Augmentation of personnel will be required for all elements of response – fire, police/security, emergency management, utility maintenance, shelter staffing, etc.

1.1 CLATSOP COUNTY OREGON

1.1 Clatsop County

Population: Approximately 37,039 actual population and as a result of seasonal and weekend tourism can increase to greater than 75,000.

Incorporated Coastal Cities:

Astoria, Cannon Beach, Gearhart, Seaside and Warrenton.

The executives of incorporated cities within Clatsop County are responsible for the direction and control of their community resources during emergencies.

Unincorporated Areas: Arch Cape, Bradwood, Brownsmead, Carnahan, Clifton, Elsie, Fern Hill, Fort Stevens, Grand Rapids, Hamlet, Hammond, Jeffers Garden, Jewell, Jewell Junction, Knappa, Lukarilla, Melville, Miles Crossing, Mishawaka, Navy Heights, Necanicum, Oklahoma Hill, Olney, Skipanon, Sunset Beach, Surf Pines, Svensen, Svensen Junction, Taylorville, Tolovana Park, Tongue Point Village, Uniontown, Vinemaple, Wauna, Westport.

Major Rivers: Columbia River, Necanicum River, Hunt Creek, Gnat Creek, Big Creek, Prairie Channel, Wallooskee River, Youngs River, Lewis and Clark River, Walker Creek, Beneke Creek, North Fork Nehalem River, Nehalem River, Neawanna River.

Local Response Support: Through extensive emergency management both at the County level and local community levels, the Sheriff's Department, local police and fire, search and rescue teams, and locally based emergency response trained volunteer teams are available to provide support and supplement local response and recovery operations.

First Responder Agencies / Entities:

The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting Clatsop County:



Cascadia Subduction Zone Plan - County Response Information Annex

1.1 Oregon Coastal Counties – Clatsop County

Emergency Management Services

Clatsop County Office of Emergency Management

Law Enforcement Services

Astoria Police Department	Cannon Beach Police Dept.	Clatsop County Sheriff's Dept.
Gearhart Police Department	Seaside Police Department	Warrenton Police Department

Fire Services

Astoria FD	Knappa-Svensen, RFPD	Olney-Walluski RFPD	Hamlet Volunteer FD	John Day RFPD	Elsie Vinemaple RFPD
Warrenton RFPD	Olney Walluski Fire & Rescue	Oregon Department of Forestry		Westport-Wauna RFPD	Camp Rilea Wildland
Cannon Beach RFPD	Gearhart Fire Department	Lewis & Clark RFPD	US Coast Guard	Mist-Birkenfeld RFPD	Seaside Fire Department

Ambulance Service

Medix Ambulance Service provides seven ambulances based in Warrenton; ALS ILS BLS	Knappa Fire District provides one ambulance based out of Knappa; ALS BLS

Public Health and Hospital Services

Columbia Memorial Hospital – Astoria	Providence Seaside Hospital - Seaside

Emergency Communications Services

North Clatsop (Astoria) Regional Dispatch Center provides 9-1-1 Emergency Dispatch for the following agencies:

Clatsop County Sheriff	Westport Fire & Rescue	Astoria Police and Fire Departments	Oregon State Forestry	Knappa, Svensen Burnside RFPD	U.S. Coast Guard Air Station
Olney Walluski Fire & Rescue	Warrenton Police and Fire Departments	John Day, Fernhill RFPD	Elsie Vinemaple RFPD	Port of Astoria Security	

South Clatsop (Seaside) Dispatch Center , provides 9-1-1 Emergency Dispatch for the following agencies:

1.1 Oregon Coastal Counties – Clatsop County

Gearhart Police and Fire Departments		Seaside Police and Fire Departments		Cannon Beach Police and Fire Departments
Oregon Department of Forestry	U.S. Coast Guard Air Station	Oregon State Police	Clatsop County Sheriff	Hamlet Volunteer FD

Identified Community Points of Distribution Locations

Yet to Be Identified by County Emergency Management

Identified Emergency Mobile Home Staging Locations

Yet to Be Identified by County Emergency Management

County Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Clatsop County Office of Emergency Management, County Departments, Cities, volunteer organizations and the private sector;
- All primary emergency response staffs are trained and experienced in operating under NIMS and ICS;
- The County and Cities will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the state;
- The population of Clatsop County generally increases during peak tourist season reflecting a large influx of tourists, seasonal residents, daily visitors, cruise ship passengers and recreation enthusiasts;
- Significant increases to the local population may introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;
- Due to post-event logistics challenges, personal self-sufficiency for the population may be necessary for an unknown amount of time that could range from several days to several weeks;
- Local emergency planning efforts will focus on accommodating residents while preparing for large changes in population trends throughout the year;
- Response communication, transportation routes, equipment, and certain critical facilities may be destroyed or rendered inoperable during a disaster;
- Effective response will need public officials, first responders, volunteers, and residents to be familiar with established policies and procedures, assigned pre-designated tasks, provided with evacuation and assembly instructions and

1.1 Oregon Coastal Counties – Clatsop County

formally trained in their response duties, roles and responsibilities required during emergency operations;

- The City of Seaside expects to lose all emergency response capabilities.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

With this scenario emergency services will be immediately overwhelmed. All incident response will need to be prioritized due to limitations of survivable infrastructure, equipment and the ability of staff to reach their designated posts or offices. Major bridges over estuaries and waterways will be impacted and most likely impassable. Many coastal areas will be isolated due to the loss of roadways, bridges and communications. These isolated pockets of survivors may be on their own for a time period of much greater than 72 hours until communications and transportation between them can be reestablished.

Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and resources.

There will be an immediate need to evacuate those survivors in need of resource-intensive care, and the need to evacuate the general surviving population will be a priority in order to lessen the burden on responders and resources.

Clatsop County Priorities:

Clatsop County Sheriff's Office

- Safety of emergency response personnel and assets;
- Take immediate protective measure for emergency personnel and resources;
- Assessment of County essential facilities for safety and security;
- Provide available equipment, resources and personnel to respond to community needs;
- Initiate response activities as conditions allow;
- Secure jail and coordinate with neighboring jurisdictions to transfer prisoners if necessary;
- Provide traffic control for evacuation and response as needed;
- Provide damage information to County emergency management or the State ECC.

Clatsop County Emergency Management

- Ensure safety of facilities and staff;

1.1 Oregon Coastal Counties – Clatsop County

- Enact COOP protocols if needed - primary EOC is located at Camp Rilea, if that location is unusable or inaccessible, Clatsop County is prepared to operate their EOC wherever feasible;
- Contact County wide AOC's (agency operation centers) to get situational awareness and needs information;
- Coordinate response with multiple impacted sites and limited resources;
- Initial emergency response activities will focus primarily on minimizing loss of life and property and damage to critical infrastructure;
- Establish contact with State ECC (– Emergency Communication Center) to request additional assistance;
- Clatsop County agencies and departments with developed COOPs will establish alternate facilities and staff locations as applicable;
- It is estimated that surviving Communication sites will last 10 days with propane backup.

Clatsop County Public Information

- Work with Emergency Management and other responding agencies to distribute targeted public information ;
- Work with media outlets coming into the area and coordinating messaging from responding agencies.

Clatsop County Public Health

- Assess and determine safety and usability of County Health Department staff and assets;
- Establish contact with Clatsop County hospitals to determine status and needs;
- Coordination with County Emergency Management to be able to maximize limited resources to address needs;
- Provide for the coordination and direction of County medical and health services and resources;
- Assess health hazards caused by damage to sewer, water, food, supplies, or other environmental systems and provide safety information;
- Serve as coordinator for public health and medical services;
- Serve as coordinator for Mass Care, Emergency Assistance, Housing and Human Services;
- Focus is on surveillance of public health issues (water, sanitation, vector control);
- Monitor environmental infrastructure (water, sanitation, and vector control);
- Assess the needs of special populations (e.g., elderly, disabled, homebound, and non–English-speaking);
- Initiate injury prevention and surveillance programs;

1.1 Oregon Coastal Counties – Clatsop County

- Ensure that essential facilities will be able to function post-impact (hospitals, health departments, physicians' offices, storage sites for health care supplies, dispatch centers, paging services, and ambulance stations);
- Issue health advisories as needed;
- Allocate resources to match the needs of the disaster. Ensure the continuity of health care services (acute emergency care, primary care, and preventive care).

Clatsop County Cities

General Priorities of Cities in Clatsop County:

- Safety of emergency response personnel and assets: fire, police, public works, continuity of government;
- Safety of families of responders and other city staff;
- Provide public safety and security;
- Provide care and shelter to survivors gathered at evacuation sites;
- Prioritize and determine fire and rescue response;
- Assessment of emergency support assets;
- Assessment of essential facilities-police, fire stations, local government offices, for safety and security;
- Assessments of:
 - Safety of lifeline roads and bridges.
 - Safety of tide gates and levees.
- Public works to assess damage to critical utility services;
- Safety assessment of pre-designated sheltering facilities.

City of Astoria has a resident population of approximately 9,477 which can increase by 10,000 during peak tourist season and serves as an active port for commerce and cruise ships during the summer months. The city sits at an elevation of 23' above sea level. The City Public Works shop is located near the tsunami inundation zone.

Water is a big concern for the City of Astoria. The majority of pipe systems are unlikely to survive. Currently the City is looking to expand the use of automatic shut off valves to preserve reservoir water. The City also has two emergency portable faucet stations with 10-15 taps on each that could be placed in the community to provide water to survivors.

City of Cannon Beach has a resident population of approximately 1,680 and sits at an elevation of 30' above sea level. Currently the city is developing a system of caching of food and expanding ICS training for approximately 30 volunteers.

The city has robust evacuation planning, but will likely be short the needed supplies for those survivors at assembly areas. The city is currently planning for pre-deployed containers of supplies at evacuation areas designated as "super sites". This program will

1.1 Oregon Coastal Counties – Clatsop County

be developed and expanded upon over time. Hypothermia and unsheltered evacuees is a big concern.

Most firefighters live in the Cannon Beach area, but many Cannon Beach police officers live outside the area and may not be able to report to duty. Response personnel unable to report for duty have instructions to report to other jurisdictions where they may be able to provide assistance.

City of Gearhart has a resident population of 1,150 and sits at an elevation of 26' above sea level, the dune line to the West of the City ranges from 46 feet to 65 feet. There are evacuation areas in the core area of the city. The majority of the flooding will come from the Necanicum and Neacoxie estuaries, not from the ocean itself (according to recent estimates).

City of Seaside has a resident population of approximately 6,457 (which can increase to 30,000+ in peak tourist season), and sits at an elevation of 12' above sea level; the City is extremely vulnerable in this catastrophic event.

City of Warrenton has a population of 4,096 and sits at an elevation of 8' above sea level. The city is built on tidal flats and Youngs Bay Estuary at the mouth of the Columbia River.

Astoria 911

- Assess and determine safety and usability of 911 staff and assets;
- Ensure safety of staff's families;
- Assess and repair if possible functionality of 911 system equipment and communications;
- Has ability to function using handheld radios to coordinate and communicate with responders.

*Currently undergoing \$1.15 million seismic enhancement upgrade (completed by fall 2012)

Facility also houses fire, police, two command vehicles and a HAZMAT 11 vehicle.

Seaside 911

- Assess and determine safety and usability of 911 staff and assets;
- Ensure safety of staff's families;
- Assess and repair if possible functionality of 911 system equipment and communications;
- Has alternate communications site with pre-staged equipment;
- Has the ability to function off-site using handheld radios to coordinate and communicate with responders;
- Has portable HAM radio equipment.

The Seaside 911 facility houses police and all associated vehicles.

1.1 Oregon Coastal Counties – Clatsop County

Clatsop County Fire Defense Board

General Fire Priorities

- Safety of staff and families is the first priority, stations are prepared to shelter families;
- Personnel are instructed to respond to the nearest surviving fire station;
- Ensuring safety and usability of equipment, if possible staging equipment to safer locations on high ground, or in the case of fire boats, to a pre-designated safe location up river;
- Assess safety and usability of facilities;
- Assist and rescue survivors;
- Determine safety and accessibility for designated shelter areas for survivors;
- Make contact with County and City('s) EOC to advise on current response status and inform them of needs.

Available Assets:

Fire

Astoria Fire and Rescue consists of two fire stations with eleven full time firefighters and approximately 12 volunteer firefighters. Astoria fire stations are located outside of the tsunami inundation zone, and they expect that a large proportion of equipment is likely to survive the event.

Astoria Fire department serves a population of 10,000, with the number of people in town swelling to 25,000+ during tourist season.

Astoria Fire has HAM radio capability, both fixed and mobile as well as a satellite phone and satellite internet via the OSFM HAZMAT unit.

EOC for City of Astoria will be activated at Station 25.

Camp Rilea Wildland Fire has one full-time and two to four seasonal firefighters. The fire station is located near the tsunami inundation area for this event and its survival is questionable. Upon assessing safety of personnel and families, Camp Rilea Wildland will assist the Hamlet Community, and provide mutual aid as able. In addition to the needs indicated later in this document, they anticipate the need of EMS and medical supplies due to their anticipated isolation.

Camp Rilea Wildland serves a population of 120-1000 depending on the time of year.

Camp Rilea Wildland has a fixed HAM radio, HF radio, and a satellite phone.

Cannon Beach Fire Department supports two fire stations with two paid and 24 volunteer firefighters. Cannon Beach has two stations, one in mid-town, with another in Arch Cape (they are in the process of constructing a new station in Arch Cape) both located in the tsunami inundation zone. If the stations survive, there will be water

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damage to the lower level. For the fire station located in mid-town, depending on the depth of the water, equipment and apparatus that are unable to be moved to a higher location could be recovered with heavy equipment to remove debris. The current Arch Cape station is not expected to survive or be salvageable. The new station, once constructed will have a much higher likelihood of surviving, and its equipment being usable or at least recoverable.

Cannon Beach Fire serves 2,300 full time residents, with the population swelling to 15,000-20,000 during peak tourist season.

The department has HAM radio capability at two fixed locations (fire stations), along with two satellite phones.

The department provides high angle rescue, surf rescue, EMT's, rescue ambulance, a Zodiac boat and two Yamaha Rescue Craft.

Priorities of response are the following once safety of personnel and their families is met:

1. Activation of the Community Warning System (COWS);
2. Establishment of ICS for incident response;
3. Establishment of EOC;
4. Movement of fire equipment and apparatus to pre-designated locations;
5. Closure of Hwy 101 to inbound traffic at both ends of district;
6. Assist or enact traffic control to facilitate evacuation;
7. Tend to survivor informational and medical and life/safety needs.

Gearhart Volunteer Fire Department staffing consists of a paid firefighter and approximately 27 volunteer firefighters. There are two fire stations - City of Gearhart (in tsunami inundation zone) and Westlake substation. Equipment located at the City of Gearhart station could potentially be salvaged by heavy equipment. Westlake would be available to respond with passable roadways. The population served by the department is 3,100 residents and a tourist population that can swell the population to 10,000+.

There is fixed HAM radio capability at the Westlake station. Local communications will occur on tac channel 9, communications to Seaside will be on channels 6 or 14.

Lack of water supply will limit operations greatly.

Hamlet Volunteer Fire Department has two stations, both located outside the tsunami inundation zone. The main station was built to seismic standards, the Hamlet station will likely collapse. The stations contain the following vehicles: two 1000 gallon pumper trucks and a reserve, one tender, one rescue, one wildland/rescue engine and one mobile air truck. If the main station survives, they will have one engine, one rescue, one wildland/rescue and one mobile air truck available for response. The department has a staff of 12 volunteer firefighters.

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The Hamlet Volunteer FD serves 400 full time residents, with tourists possibly increasing the population to 1000.

The department has three HAM radio operators on staff with personal radios; the department owns zero.

John Day Fire District employs one paid and five volunteer fire fighters at its one station. The station is located out of the tsunami inundation zone. It is unlikely to survive the earthquake. Surviving equipment may need extracted from the rubble. The District serves approximately 500 people. In addition to the general priorities described above, the John Day District plans on establishing a command center with Knappa Fire. They expect to have minimal firefighting capabilities due to lack of water, loss of equipment, minimal personnel, and the inability to respond due to damaged roads.

Knappa Fire District has three stations and serves the communities of Knappa, Brownsmead and Svensen. All stations are located outside of the tsunami inundation zone. The District expects to lose all three stations, necessitating the removal of rubble to free surviving equipment. In addition to the general priorities described above, the Knappa District plans on establishing a command center with John Day Fire District. They expect to have minimal firefighting capabilities due to lack of water, loss of equipment, minimal personnel, and the inability to respond due to damaged roads.

Olney Walluski Fire and Rescue District is a completely volunteer district with two stations, serving a population of 3000, however due to the County Fairgrounds being in the district that number can increase by as much as 30,000 over a weekend. Both stations in the district are outside of the tsunami inundation area, River Point Station will experience heavier damage that may necessitate the extraction of equipment from the rubble. Olney sub-station will fare better and would be able to respond given roads are accessible. It is likely that forest roads may be needed to reach isolated areas if they are clear of debris. The River Point station has been determined as the command center for fire communications.

Seaside Fire & Rescue has three full-time firefighters and 36 volunteer firefighters. They provide fire protection, rescue and emergency medical services. There is one station located in Seaside, located within the tsunami inundation zone. Seaside Fire and Rescue serves 8500 full-time residents, the population including tourists can swell up to 75,000 people.

Seaside Fire and Rescue has a portable HAM radio.

Due to the severity of this event, the fire station and equipment will likely not survive the event. It is entirely unknown if Seaside Fire and Rescue could provide any personnel or equipment to respond to needs of the city.

US Coast Guard, Columbia River has 15 personnel serving at the City of Warrenton Airport. The facility is located in the tsunami inundation zone. It is possible that two

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airport crash trucks would survive the event. Communication occurs on VHF-AM Aircraft Band, and VHM-FM encrypted. The facility plans to move all surviving equipment and personnel to Camp Rilea if possible.

Warrenton Fire consists of two fire stations (Warrenton and a sub-station in Hammond); both facilities are located in the tsunami inundation zone. They are staffed by three full time firefighters and 32 volunteer firefighters. Warrenton Fire serves a population of 6,000, with a tourist population swelling the population to approx. 15,000 people.

It is extremely unlikely that either station will survive this event; it may be possible to salvage and recover equipment.

Personnel are instructed to report if at all possible to their assigned duty station upon ensuring the safety of families. If unable, they are instructed to monitor pagers or radios for information. A primary function would be to guide survivors to pre-designated tsunami collection points.

Medix Ambulance Service is a paid provider of ALS911 and inter-facility transports. Equipment includes ALS ambulances, four wheelchair vans and two comfort cars. They serve Clatsop County, and Pacific County, WA. Medix has four stations, two located within the tsunami inundation area. Medix maintains dispatchers at communications facility at all times. Medix has its own paging system and maintains direct phone lines with both North and South 911 call PSAPs.

They expect to have surviving five of seven ambulances and all wheelchair vans and cars. Additionally, most hard goods, supplies, ALS equipment, 35kw diesel generator (able to operate for approximately 14 days based on fuel supply) and all radio equipment. Fuel supplies are also located outside of the inundation zone and the company has made provisions to provide service before additional medical support can be brought into the area (approx. 72 hours).

Medix serves approx. 38,000 residents of both states and with tourists they would serve 75,000+ people at peak times. Their priorities are to account for personnel and to determine available personnel and resources to respond. They would then communicate and learn the status of area hospitals and determine conditions of roadways. Upon receiving communications, prioritize request for ambulances to areas of greatest need.

Clatsop County Public Health

- There are two hospitals in the County (Seaside and Astoria). Providence Seaside Hospital in Seaside will not survive the event based on the scenario. – unclear: independent hospital in Astoria;

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- Clatsop County Public Health Department is in Astoria, with departmental staff residing throughout the County. Decentralized staff are instructed to deploy to first responder sites around County post-event;
- There are supply caches of first aid supplies, sanitation and water quality supplies strategically placed around County including Astoria, Jewell, Knappa, and Cannon Beach.
- The Health Department has two satellite phones and HAM radio capability on site; however there is no HAM operator on site, they would need to request a HAM operator. The satellite phones are with designated staff on-call.
- The Department utilizes a volunteer management system for health and medical volunteers, including credentialing. The volunteer management system is managed by the Human Resource Department of Clatsop County. Each cache site in the county has a hard copy manual of the system that permits just-in-time credentialing and mobilizing of volunteers.

Law Enforcement

Clatsop County Sheriff's Department

- There are currently 23 deputies, each with take-home vehicles;
- Search and rescue has 15 ground volunteers, a high angle rescue team, dive team, and a marine team. There is limited USAR ability;
- Substations for the Sheriff's Department are located in the Knappa and Jewell areas;
- Initially there will be localized response with officers responding on their own until communication can be re-established and a coordinated response initiated;
- Jail houses approx. 60-70 inmates. There are concerns over building stability, and no water or sewage available post-quake. Jail has a generator. It is extremely likely that inmates will need to be moved to a more secure facility, or to a temporary guarded location;

Astoria Police Department provides 24 hour law enforcement, criminal investigations, traffic enforcement and Emergency Response. The Police Department hosts a Citizens Police Academy and Community Policing.

Cannon Beach Police Department provides 24 hour law enforcement, criminal investigations, traffic enforcement and emergency response. The Police Department hosts a Community Policing Program.

Seaside Police Department provides 24 hour law enforcement, criminal investigations and traffic enforcement and emergency response.

Warrenton Police Department provides 24 hour law enforcement, criminal investigations, traffic enforcement and emergency response.

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Gearhart Police Department provides 24 hour law enforcement, criminal investigations and traffic enforcement and emergency response.

Oregon State Police has a station located in Astoria, but its location next to the river means it is unlikely to survive. OSP has an ocean going vessel located here, but there are no protocols on moving it to a safe location post-event. OSP Troopers stationed in Astoria are instructed to report to the County EOC at Camp Rilea if their facility is lost, or if they are unable to report to Astoria.

Additional County Assets and Capabilities

Astoria Branch of Portland & Western Railroad is a 520 mile short line freight railroad that interchanges with the Albany and Eastern Freight Railroad, Burling Northern Santa Fe Railway, Central Oregon & Pacific Railroad, Coos Bay Rail Link, Hampton Railway, Port of Tillamook Bay Railroad and Union Pacific Railroad. Commodities include aggregates, brick and cement, chemicals, construction and demolition debris, food and feed products, forest products, metallic ores and minerals, steel and scrap. The Astoria Branch runs parallel to the Columbia River to Astoria, from Portland.

The Port of Astoria manages a combination of marine, marina, industrial, and aviation facilities. These facilities are primarily located in the City of Astoria (Port waterfront properties and infrastructure) and the City of Warrenton (airport and industrial properties). The Port Authority provides services to commercial and recreational boaters, two marinas, boat yard, cargo vessels, fish processing, cruise ships, research vessels and deep draft marine terminals. It also provides commercial leasing opportunities on its properties at the airport, Skipanon Peninsula, Tongue Point and waterfront locations. North Tongue Point Naval Air Station is a former submarine and destroyer base owned by the Washington Group.

Astoria/Warrenton Regional Airport is a joint civil-military public airport located three miles southwest of the City of Astoria. It is located in the adjacent City of Warrenton and is also the home of Coast Guard Air Station Astoria. The Airport has two major runways: 5,796' and 4,996'; asphalt base.

U.S. Coast Guard Group Astoria controls operations of three HH-60 Jayhawk Helicopters and three Motor Lifeboat rescue stations located on the Oregon and Washington coasts. The U.S. Coast Guard Group provides search and rescue operations, law enforcement, aids to navigation support, and environmental protection. It also provides limited operations support to the National Motor Lifeboat School and Advanced Rescue Swimmer School as well as logistical support to two Pacific Area Coast Guard Cutters 'Alert' and 'Steadfast', both home ported in Astoria.

Clatsop County Amateur Radio Services has 42 ARES/RACES radio operators in the county along with several hundred HAM operators along the Oregon Coast capable of

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supporting emergency communication. These volunteers have protocols to “check-in” on pre-established frequencies in the event of a disaster. Many operators have personal equipment and could provide assistance if County responder communications equipment is damaged.

Clatsop County Private Sector Assets and Capabilities:

PacifiCorp Power: The Cascadia scenario indicates the potential for a temporary blackout across most of the Pacific Northwest, and likely longer-term outages west of the Cascade Mountains, particularly in coastal communities.

Pacific Power’s initial priorities for response to Clatsop County and all areas served across the Pacific Northwest:

- Implement employee / family care following the event;
- Assess and coordinate available resources;
- Establish command and control;
- Activate Pacific Power Emergency Action Center;
- Activate business continuity plans;
- Establish communication with other utilities and the ESF-12 Liaison;
- Stage and deploy company resources from across the region;
- Activate mutual assistance agreements;
- Assess damage (ground and air);
- Clear hazards .

With our company’s coastal resources likely impacted by the event, primary assistance would come from resources outside the impact area, with initial work being assessment and hazard mitigation (clearing downed lines).

Fuel, food, water, shelter, security and sanitation will all be key services needed to support crews in the impacted area during assessment, hazard mitigation and eventually power restoration work.

The following is an example of issues that could delay response activities to the coastal region:

- Travel into the impacted area is blocked, prohibiting assisting crews from accessing coastal communities (e.g. highways 8, 26, 30 and 101 are blocked);
- Unsafe conditions exist in the impacted area, prohibiting personnel from entering the region (e.g. aftershocks and chemical, biological or security hazards);
- Highway 101 is damaged due to tsunami debris, and assisting crews may have to wait for debris removal before accessing communities for assessment, hazard removal and restoration work;
- Pacific Power’s Clatsop Operations Center may be functional, but access to and from the facility may be cut-off due to tsunami damage (debris);

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- The lack of available fuel, food, water, shelter and sanitation in the impacted area may delay response by assisting crews.

It will also be important that public resources from local, county, state and federal agencies ensure two-way communication and incident coordination with critical private sector organizations.

NW Natural Gas NW Natural's initial priorities for response to Clatsop County:

Implement employee/family accountability and assistance

- Establish command and control;
- Mitigate initial hazards (control gas supply to affected areas);
- Activate NW Natural Emergency Operations Center;
- Assess and coordinate available resources;
- Assess damage (Gas Control Center, ground and air);
- Establish communication with other utilities and Oregon State ESF-12 Liaison;
- Deploy company resources to critical locations;
- Activate mutual assistance agreements;
- Restore service to functional customers.

Fuel, food, water, shelter, security and sanitation will all be key services needed to support crews in the impacted area during assessment, hazard mitigation and eventually gas supply restoration.

The following include, but are not limited to, issues that could delay response activities to the coastal region:

- Travel into the impacted area is blocked, prohibiting assisting crews from accessing coastal communities (e.g. highways 8, 26, 30 and 101 are blocked);
- Unsafe conditions exist in the impacted area, prohibiting personnel from entering the region (e.g. aftershocks and chemical, biological or security hazards);
- Highway 101 is damaged due to tsunami debris, and assisting crews may have to wait for debris removal before accessing communities for assessment, hazard removal and restoration work;
- NW Natural's Astoria Service Center may be functional, but access to and from the facility may be difficult;
- Gas supply from the valley to the coast may be interrupted due to damage to gas transmission lines;
- The lack of available fuel, food, water, shelter and sanitation in the impacted area may delay response by assisting crews.

Partnership with public agencies and other private sector organizations will be critical to ensure communication, transportation and resource coordination.

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A unique issue to the re-establishment of gas service is that it is required to be done by licensed technicians to each individual meter to re-light each appliance. In Clatsop County alone it would take approximately a month to complete this task, needing 300-400 personnel. This would, however, vary based on the amount of surviving structures.

American Red Cross has the following Clatsop County assets - 35 shelter sites, approximately 25 volunteers, six trailers, five caches consisting of cots and blankets, limited first aid, MREs or heater meals are located in some caches as are comfort items for children.

Additional:

Camp Rilea has rolling stock and tents owned by the Oregon Army National Guard;

Not located in Clatsop County, but the USFS has a stockpile in Tillamook County with approximately 3000 meals, tents, and sleeping bags.

ODOT has an AM emergency notification radio transmitter. It is on a short pole, and would likely survive the shaking and/or be easy to re-establish service. This could be used to broadcast much of the coast - 1650 AM.

Clatsop County Catastrophic Event Operational Challenges:

- Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and resources;
- Damage to highway and port infrastructure will inhibit response capabilities;
- Water systems for fire suppression will likely not survive;
- Restoration of transportation routes can conceivably take weeks to months;
- Clatsop County will be fractured into pockets of isolated communities and neighborhoods due to loss of roadways, bridges, communication, and tsunami flooding;
- Individual pockets of survivors will be on their own for a time period of much greater than 72 hours until communications and transportation between these pockets is re-established;
- Many locations will be without emergency support of fire, law enforcement, and ambulance service until communication and transportation between these pockets is re-established;
- According to County and coastal city tsunami evacuation plans, many will be in pre-designated assembly areas and unable to get back to their homes;
- Depending on time of year, a significant tourist population may be located in coastal areas and unable to leave until transportation services can be restored. Most City and County food and water resources are not capable of providing for these additional populations;

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- Generator Power will last for a few days – some hand pump capabilities for emergency access to fuels without power;
- Many generators in county require propane fuel to function;
- County and City resources have very limited urban search and rescue capabilities;
- Volunteer firefighters may not be able to respond due to roadway damage, family commitments and work priorities.

Port of Astoria

- The deep draft port channels will likely be inundated with debris which will need to be cleared prior to use for any type of deep draft emergency response shipping of essential needs supplies;
- Channel navigation will be destroyed, limiting access to points up river;
- Use of satellite phones for communication has proved limited in past use occurrences due to weather (approx. only getting 15 minutes of availability in an hour);
- County and City resources have very limited urban search and rescue capabilities;
- County and City resources have very limited potable water storage and/or water purification capabilities.

Clatsop County Public Health / Hospitals in Clatsop County

- Due to the scale of the incident, the medical system will be immediately overwhelmed;
- Modeling scenario calls for the complete loss of Providence Seaside Hospital;
- Hospitals have no stored supply of potable water or sterile water which will limit the ability to treat survivors;
- Medications will be limited due to the inability of receiving regular shipments. Lack of access for commercial medical suppliers;
- Survivors with chronic conditions will require prescriptions quickly or they will add to the medical burden as their conditions deteriorate;
- Medical facilities may not be able to provide more advanced care due to damages;
- Mortuary capabilities are limited.

City of Seaside

- Seaside will be isolated, and majority of town inundated by tsunami, all City services are in the inundation zone including Providence Seaside Hospital;
- Geography of community leads to a challenging situation for residents fleeing the tsunami;

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- Repeaters and communication equipment in City will be compromised and likely unusable by event, can however use portable communications gear to contact county EOC at Camp Rilea;
- Can only provide limited shelter and provisions for survivors at evacuation points;
- Police and fire personnel located outside of City are instructed to report to other communities to offer assistance if unable to report for duty in Seaside;
- 50 gallon containers with cached food and supplies are located at different spots within City, outside of inundation zone, and residential areas;
- Police and fire personnel located outside of City are instructed to report to other communities to offer assistance if unable to report for duty in Seaside;
- Seaside Heights, which is the secondary City EOC, is located next to hospital, and could be in the impacted area.

Support Needed Immediately After a Catastrophic Event:

- Immediate aerial and/or sea support needed to resupply communities with potable water, food, sheltering equipment and support, and response personnel;
- Fuel and batteries to keep communication gear operational;
- Immediate aerial support needed for evacuations of special medical needs survivors, patients needing serious care (dialysis and other resource intensive procedures), injured and other vulnerable populations;
- Need delivery of diverse fuels to include diesel, gasoline and propane;
- Need replacement trained and equipped emergency response personnel;
- Security contingents need to arrive with all out-of area response elements, local law enforcement will be unable to provide with limited personnel and resources;
- Urban search and rescue teams, self-sustaining with equipment;
- Aerial support needed for damage assessment;
- Assistance in re-establishing transportation networks, and equipment to re-establish roadways;
- Water purification equipment needed in all populated areas to provide potable water to survivors;
- Water purification equipment needed in all medical facilities;
- Sanitation facilities needed in all populated areas;
- Mass fatalities incident teams and equipment;
- Supplies of pharmaceuticals for chronic medical conditions, including psychological and behavioral health needs;
- Durable medical supplies and equipment for temporary medical facilities;
- Communications capabilities need to be re-established;

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- Security / policing staff needed to safeguard local pharmacies, shelters, and provide increased security at critical facilities and surviving food and water locations;
- Amateur radio equipment and antennae;
- Spontaneous volunteer management assistance and screening of volunteer skills and backgrounds;
- Screening capabilities for professional medical volunteers;
- Immediate access to communication and information to allow survivors to communicate with family members outside of the area and provide reunification services;
- Competition with other responders using the same contracts (i.e. helicopters).
- Cell phone re-establishment (COW Cellular on Wheels);
- Wind up radios for survivors;
- Need for shallow draft vessels to provide assistance and re-supply for Astoria and locations further up the Columbia until river navigation and channel depth is determined safe for larger vessels;
- Need for equipment and personnel to assess, repair and reopen a navigable channel on the Columbia;
- Additional volunteers to staff shelters;
- Will need open roadways to resupply shelters;
- Evacuation of willing residents to lessen support needs.

PacifiCorp support needed immediately after a catastrophic event:

- Will need fuel, housing and feeding of responders;
- Aerial assessments of power lines and facilities;
- Transportation and access on damaged roadways.

NW Natural Gas Support need immediately after a catastrophic event:

- Will need to immediately enact mutual assistance agreement to get help from other areas;
- Will need fuel, housing and feeding of responders;
- Transportation and access on damaged roadways;
- Assistance on assessment of damaged lines and facilities.

Identified Mitigation and Pre-Event Preparation Needs:

- Additional caches of radio equipment and antennae;
- Need to have better coordination with cross river communities in Washington;
- There are primarily volunteer firefighters in county. Firefighting personnel may have a wealth of experience outside of firefighting and be able to contribute to response. Identifying these skills prior to an event of any type could benefit Clatsop County;

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- Cities with essential services and facilities in the tsunami inundation zone need assistance and financing to relocate these assets to City owned lands outside of the tsunami inundation zone;
- Increased coordination and/or agreements with the private sector to provide assistance post event;
- Continued neighborhood and community training with Citizen Corps, CERT, Map Your Neighborhood and similar programs for public awareness and personal preparedness. Funding for citizen training materials and equipment;
- Funding to purchase water purification systems and water stores for hospitals and clinical medical facilities;
- Funding for storage facilities for food, water and sheltering supplies;
- Funding for individual community supply caches and storage containers to possibly include bottled water, water filter straws, shelter canopies, blankets, tarps, rain ponchos, survival food bars, sanitation supplies, and medical supplies;
- Special needs and long term care facilities need increased planning, protocols and procedures for patient evacuation, patient sheltering and care;
- Continued funding for retrofitting and possible relocation of essential facilities in all areas;
- Agreements with the private sector to supplement and address: bridge engineering, safety assessment and temporary rebuilding of roadways. Private sector coordination with aerial support companies needed also;
- Surge capacities of local hospitals cannot handle the medical needs after this event. Pre-event purchase and storage of critical/essential equipment is needed;
- There is a need for increased interoperable communications capability and equipment;
- Continued support and funding for retrofitting of local infrastructure to better withstand seismic events;
- Need for funding or technical assistance to establish vertical evacuation shelters in coastal cities;
- Increased communication abilities for Rural Fire Protection Districts and rural communities, especially in communities that are expected to be isolated in this event;
- Increased medical community plans for the evacuation and care of severely disabled/and non-ambulatory residents. These plans and protocols need to extend to in-home caregivers, foster homes, and long term care facilities;
- Caches of pharmaceuticals needed including oxygen, insulin, Lasix, antibiotics, Coumadin, psychotropic drugs, meds and supplies for burns;

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- Generally patients needing these medicines are faced with challenges from insurance companies to have a 3 month supply on hand in case of emergencies. Pushing for changes from insurance companies to allow for emergency supplies of these items will increase the preparedness of communities greatly.
- Increase outreach and training to communities to foster a culture of personal responsibility and preparedness;
- Outreach to tourists and non-local visitors regarding evacuation and preparedness;
- Future power and gas mitigation efforts and investment needs to focus on providing reliable service for those service areas that are likely to survive the quake and will likely remain afterwards;
- Power and gas companies need recognition from responding agencies and governments that they will need fuel, access and resources to complete restoration and repair of utilities;
- Increased funding for pre-event installation of auto shutoff valves to reduce gas leaks. Currently the main feeder lines from valley have them, as do newer meters installed in the last 10 years;
- Need for state and local governments and the private sector to better coordinate for effective response and acquisition of supplies and resources.

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1.2 COOS COUNTY OREGON

1.2 Coos County

Population: Approximately 63,043, actual population as a result of tourism can increase during spring and summer months.

Incorporated Coastal Cities

Bandon, Coos Bay, North Bend, Lakeside

The executives of incorporated cities within Coos County are responsible for the direction and control of their community resources during emergencies.

Unincorporated Coastal Communities:

Charleston, Barview, Hauser, North Bay, and Glasgow.

Major Rivers: Coquille River, Coos River, Millicoma

Local Response Support:

Through extensive emergency management planning both at the County Level and Local Community levels, the Sheriff's Posse, wildland search and rescue teams (some cross trained in CERT), CERT (Citizen Emergency Response Team) Groups, Medical Reserve Corps, ARES/RACES HAM radio teams (Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services), and Volunteers in Policing are available to support and supplement local response and recovery operations.

First Responder Agencies / Entities:

The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting the coastal areas of Coos County:



Cascadia Subduction Zone Plan - County Response Information Annex

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Emergency Management Services

Coos County Office of Emergency Management

Law Enforcement Services

Coos County Sheriff's Office	Bandon Police Department	Coos Bay Police Department	North Bend Police Department
Coquille Indian Tribe Coos Bay / North Bend	Lakeside Volunteers in Policing (VIP)	Hauser Volunteers in Policing (VIP)	

Fire Services

Coos County Fire Defense Board	Bandon RFPD #18	Charleston RFPD	Coos Bay Fire & Rescue	Millington Fire (Coos Bay)	Sumner RFPD (Coos Bay)
Lakeside RFPD (Lakeside)	North Bend Fire Department	Hauser RFPD (North Bend)	North Bay RFPD (North Bend)	Southwestern Oregon Community College	

Ambulance Services

Bay Cities Ambulance	City Fire Department & RFPD Ambulance Services	Lower Umpqua Ambulance

Public Health and Hospital Services

Coos County Public Health	Bay Area Hospital (Coos Bay / North Bend)	Coquille Valley Hospital (Coquille)	Southern Coos General Hospital (Bandon)

Emergency Communications Services

Coos County 9-1-1	Coos Bay Dispatch	North Bend Dispatch

Identified Community Points of Distribution (C-POD) Locations

<u>Coos Bay Area:</u> Education Service Dist. 1350 Teakwood, Coos Bay	<u>Coquille Area:</u> Coquille Supply 10054 Hwy 42, Coquille	<u>Bandon Area:</u> Bandon Airport 87718 Kehl Road, Bandon	<u>Lakeside Area:</u> Lakeside Lions Club 890 Bowron Street, Lakeside

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Identified Emergency Mobile Home Staging Locations			
<u>Powers Area:</u>	<u>Coquille Area:</u>	<u>Bandon Area:</u>	<u>Lakeside Area:</u>
Powers County Park	Coquille High School	Hardin Optical- 1320 Oregon Avenue SW, Bandon	Tenmile County Park
Powers Airport	Ron's Oil- 580 North Central Boulevard, Coquille	Ray's Food- 66 Michigan Avenue, Bandon	Lakeside State Airport
<u>Coos Bay/North Bend</u>		<u>Myrtle Point Area:</u>	
K-Mart- 3111 Ocean Boulevard Southeast, Coos Bay		King Logging- 94755 Quiet Valley Lane, Myrtle Point	
WalMart- 2051 Newmark Avenue, Coos Bay		Safeway- 725 Ash Street, Myrtle Point	
Mill Casino- 3201 Tremont Street, North Bend		Coos County Fairgrounds	
North Bend HS		Union 76/Hodge Distributor- 1893 Roseburg Road, Myrtle Point	
Marshfield HS			
Thomas & Sons Trucking- 840 South Front Street, Coos Bay			
Gold Coast Truck Repair- 62612 U.S. 101, Coos Bay			
Knife River LTM- 62155 U.S. 101, Coos Bay			

County and City Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Coos County Office of Emergency Management, County Departments, Cities, volunteer organizations and the private sector;
- All primary emergency response staff are trained and experienced in operating under NIMS (National Incident Management System) and ICS (Incident Command System);
- The County and Cities will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the State;
- Due to post-event logistics challenges, personal self-sufficiency for the population may be necessary for an unknown amount of time that could range from several days to several weeks;
- The population of Coos County increases during peak tourist season, reflecting an influx of tourists, seasonal residents, daily visitors, and recreation enthusiasts;
- Significant increases to the local population may introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;

1.2 Oregon Coastal Counties – Coos County

- Local emergency planning efforts will focus on accommodating residents while preparing for large changes in population trends throughout the year;
- Response communication, transportation routes, equipment, and certain critical facilities may be destroyed or rendered inoperable during a disaster;
- Effective response will need public officials, first responders, volunteers, and residents to be familiar with established policies and procedures, assigned pre-designated tasks, provided with evacuation and assembly instructions and formally trained in their duties, roles and responsibilities required during emergency operations;
- The City of Bandon expects to lose all emergency response capabilities.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions;

Coos County will be fractured into pockets of isolated communities and neighborhoods due to loss of roadways, bridges, communication, and tsunami flooding. According to County and coastal city tsunami evacuation plans, many will be in pre-designated assembly areas and unable to get back to their homes. Individual pockets of survivors will be on their own for a time period of much greater than 72 hours until communications and transportation between these pockets is re-established. Many locations will be without emergency support of fire, law enforcement, and ambulance service until communication and transportation between these pockets is re-established.

Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and resources.

County Priorities

Coos County Sheriff's Office

- Safety of emergency response personnel and assets;
- Assessment of County essential facilities for safety and security;
- Provide available equipment, resources and personnel to respond to community needs;
- Ensure safety and security of fuel resources;
- Identify and secure potable water resources, safe sheltering facilities, sanitation facilities, and food;
- Debris removal / clearance;
- Work with County agencies and State agencies in the repair and maintenance of lifeline routes;
- Provide traffic control for evacuation and response as needed.

1.2 Oregon Coastal Counties – Coos County

Emergency Management

- Ensure safety of facilities and staff;
- Contact county wide AOC's (agency operation centers) to get situational awareness and needs information;
- Coordinate response with multiple impacted sites and limited resources;
- Establish contact with State ECC (Emergency Communication Center) to request additional assistance.

Coos County Public Health

- Assess and determine safety and usability of County Health Department staff and assets;
- Establish contact with Coos County hospitals to determine status and needs;
- Coordination with County Emergency Management to be able to maximize limited resources to address needs.

Cities of Bandon, Coos Bay, North Bend and the Coquille Indian Tribal Government

- Safety of emergency response personnel, facilities and assets: fire, police, public works, enact continuity of government protocols;
- Provide public safety and security;
- Assessment of emergency support assets;
- Assessment of essential facilities-police, fire stations, local government offices, for safety and security;
- Public works to assess damage to critical utility services;
- Safety assessment of pre-designated sheltering facilities.

Available Assets:

Fire

Coos County Fire Defense Board

- Rural Fire Protection Districts throughout the County. Coastal specific districts are: Bandon RFPD, Charleston RFPD (Coos Bay), Sumner RFPD (Coos Bay), Lakeside RFPD (Lakeside), Hauser RFPD (North Bend), North Bay RFPD (North Bend);
- Districts are volunteer departments with minimal capabilities providing fire suppression to smaller unincorporated areas. Rural Fire Protection Districts can provide auxiliary equipment and manpower to larger incidents if needed;
- Have satellite phone communication capabilities.

Bandon RFPD provides fire protection for the City of Bandon. There are limited search and rescue capabilities between both the fire and police departments.

- Have satellite phone communication capabilities;
- Communications interoperability with the Bandon Police Department and the Oregon State Police;

1.2 Oregon Coastal Counties – Coos County

- There are five pre-designated assembly areas throughout the city.

Coos Bay Fire Department is a full service emergency safety provider covering 17 square miles, a population of approximately 23,000 with three fire stations and equipment.

- Coos Bay Fire houses Oregon, Region 15 Hazardous Materials response;
- The department manpower consists of 16 paid and approximately 40 volunteer personnel;
- Auxiliary equipment includes four, 4WD's and ten pick-up trucks;
- Medical response is supplemented with six ambulances.

North Bend Fire Department is a full service emergency response provider including marine rescue, dive rescue, fire suppression, wildland fire suppression and medical aid.

- North Bend Fire serves a population of approximately 9,695 with three fire stations and equipment;
- Response assets include: one jet boat for marine rescue & transport;
- Department manpower consists of 12 paid staff, 40 volunteers (15 are EMT certified).

North Bay Fire District is an all-risk fire and emergency services organization that responds assets from two stations and covers 29.5 square miles of suburban, rural, and industrial properties. The district provides traditional and wildland fire suppression and investigation as well as emergency medical services and specialty or technical calls for service.

- The district staffs one station and has 31 volunteer firefighters, 12 of which are State and/or nationally certified EMT's and Paramedics;
- Auxiliary equipment includes off-road and four wheeled drive vehicles, winches, chain saws, generators, and communication redundancy throughout the district;
- Agreements with industrial providers for services, equipment, and fuel during an emergency or disaster.

Coos County Health Department provides numerous public health programs as well as interfacing with the three hospitals in the County. All full service hospitals are outside of the tsunami inundation area.

- Bay Area Hospital (Coos Bay), Coquille Valley Hospital (Coquille), and Southern Coos Hospital (Bandon) all have 'Gate Keeper II' mobile medical hospital sheltering facilities and satellite phones;
- Max surge capacity of all three hospitals combined is 200;
- The Surgical Center and local clinics can take overflow from Bay Area Hospital (Coos Bay). Have three day supply of fuel to support their generator;
- Six Bay Area Clinics can provide support to hospital overflow and have satellite phones;
- Mortuary services capable of dealing with approximately 100 bodies;
- Ambulance service – 12 ALS (advanced life support) ambulances and ten BLS (basic life support) wheelchair vans;

1.2 Oregon Coastal Counties – Coos County

- Local medical radio system;
- ARES/RACES capabilities at hospitals;
- Medical Reserve Corps – approx. 20 members;
- Seven days of fuel supplies at local hospitals at regular day to day demands;
- Hospitals have areas capable of supporting helicopter landings.

Law Enforcement

Coos County Sheriff's Department

- Marine resources – three boats,
- ATV's;
- Sheriff's Posse, wildland search and rescue teams (not trained in urban search and rescue, some cross trained in CERT), CERT Teams, VIPs;
- Communications – 9-1-1 communications center, ARES/RACES and HAM radio, Communications Van, Packet Radio capabilities, Satellite phones;
- Vehicles – 34, 50+ personnel, four 4WD vehicles;
- Capability of providing sheltering and food for responders or others in unused portion of the County Jail;
- Approximately 10 – 15 days of fuel in the Coquille area for response and for generators.

Bandon Police

- Staffing availability provides for 24 hour a day, 365 days a year police service, unknown staffing post-event;
- Supplemental forces include nine volunteers and three reserve officers.

Coos Bay Police

- The Police Department is served by 38 staff members, providing for 24 hour a day, 365 days a year police service, unknown staffing post-event;

North Bend Police

- The Police Department is served by 16 Paid and 10 reserve officers, providing for 24 hour a day, 365 days a year police service, unknown staffing post-event;

Coquille Indian Tribe Police

- Tribal Police consists of three officers who are duly sworn and fully recognized as Peace Officers in the State of Oregon;
- Tribal Police Officers can assist local Police Agencies as available.

Additional County Assets and Capabilities:

- Damage assessment can be done by the County Assessor's Office;
- Coos County has numerous CERT teams throughout the County.

County Parks :

- Bastendorff (beach - in the Tsunami inundation area), two cabins which sleep six, vault toilets, 50 gallons of gasoline; Laverne park – spring water, one cabin-

1.2 Oregon Coastal Counties – Coos County

sleep six, shop building, wood stove, 50 gal. gas, one hand pump; Powers -3 cabins, sleep six, shop building, wood stove, 50 gal. Gas, 50 gal. diesel;

- Riley Park – two cabins, large parking area, 12 volt pump (fuel), 20 gal. Gas, 240 gal. diesel; Lakeside Boat Ramp, large shop (no heat), large parking area, small tractor, dump truck, two 20' trailers, one 20' boat. Equipment yard in Coquille: backhoe, dump truck, 2,500 kw generator, hand tools.

County Road Department – Shop and yard located in Coquille.

- Assets/capabilities: Staging Area – Coquille Yard;
- Bridge damage assessment team – partnered with ODOT;
- Debris Management Team;
- EOC Operations staffing along with EOC Procurement staffing;
- Heavy equipment – excavators, loaders etc.; trucks; trained staff in disaster response; base station emergency generator;
- Fuel storage: gas – 25,000 gallons., diesel-25,000 gallons;
- County Road Master would assess road damage and determine needs for getting them operational;
- Bridge Damage Assessments would work closely with ODOT.

Coquille Indian Tribe

- Tribe has a full functional Health Clinic;
- Food and water for 300 people enough to last for approximately seven days;
- Food and services are on Tribal Lands and can be shared if not needed by Tribal members;
- Have ARES/RACES radio capabilities.

International Port of Coos Bay – is the largest coastal natural deep draft harbor between San Francisco and Puget Sound.

- Entrance Range Depth – 47 feet.
- Channel Depth – 37 feet.
- Location: Lat - 43°22'North; Long - 124°22' West

Southwest Oregon Community College

- Community College has pre-designated heli-spots, flat areas for staging, and dorms for responders (depending on damage);
- All campus areas are out of the Tsunami Inundation Zone.

Catastrophic Event Operational Challenges

- Bridge and overpass damage –111 County bridges, ODOT is responsible for 173 in the County;
- Slide prone areas on major lifeline roadways which would impact supply and evacuation routes of Highway 42 and Highway 101;
- Bandon –

1.2 Oregon Coastal Counties – Coos County

- All City essential services, utilities, and public works equipment is in the Tsunami Inundation Zone. Any emergency response is likely to be very minimal if at all;
- No trained citizen CERT groups to provide assistance;
- Pre-designated assembly areas have no capabilities to provide shelter, food or water;
- City has minimal generator capabilities and all fuels are purchased commercially – no stored, City owned fuels;
- Airport in Bandon is expected to survive.
- Coos Bay – Portions of City will be isolated due to bridge damage and tsunami inundation.
- North Bend –
 - Portion of the City will be isolated due to bridge damage and tsunami inundation. Major transportation artery, Hwy. 101, will be cut off with damage to the McCullough Bridge.
- Northern portions of the County on the north side of the McCullough Bridge will need to seek medical care and sheltering in Douglas County – Reedsport. Large portions of the populations will be isolated in assembly areas and unable to return to their homes.
- County and City resources have very limited urban search and rescue capabilities;
- County and City resources have very limited potable water storage and/or water purification capabilities;
- Port of Coos Bay – The deep draft Port Channel will be inundated with debris which will need to be cleared prior to use for any type of shipping of essential needs supplies.
- Coos County Health Department / Hospitals –
 - Due to the scale of the incident, the medical system will be immediately overwhelmed;
 - Hospitals have no stored supply of potable water or sterile water which will limit the ability to treat survivors;
 - Medications will be limited due to the inability of receiving regular shipments. Lack of access for commercial medical suppliers;
 - Survivors with chronic conditions will require prescriptions quickly or they will add to the medical burden as their conditions deteriorate;
 - All hospitals have generator power with some fuels, and “Gate Keeper II” tent hospitals, however none of the hospitals have any equipment for these medical tents. Any medical equipment, bedding, supplies will need to be transported from damaged hospitals if possible;
 - Medical facilities may not be able to provide more advanced care due to conditions;

1.2 Oregon Coastal Counties – Coos County

- Mortuary capabilities are limited to approximately 100. No pre-designated refrigeration capabilities including commercial refrigeration.
- Depending on time of year, a significant tourist population may be located in coastal areas and unable to leave until transportation services can be restored. Most City and County food and water resources are not capable of providing for these additional populations;
- Water systems – for fire suppression will likely not be operational;
- Generator power will last for a few days – some hand pump capabilities for emergency access to fuels without power;
- US Coast Guard – marine facilities and equipment are at sea level and are not likely to survive. Aerial Rescue Support is at North Bend Airport (elevation 16') and is expected to receive severe damage;
- County Search and Rescue teams are trained for wildland SAR only. They will provide as much assistance as possible for Urban Search and Rescue (some cross trained in CERT).

Support Needed Immediately After a Catastrophic Event:

- Need delivery of diverse fuels to include diesel, gasoline and propane;
- Safe and secure buildings/shelters for critical infrastructure and responding personnel;
- Need replacement trained and equipped emergency response personnel from outside of the area(s). The community of Bandon expects to lose all emergency response capabilities;
- Additional urban search and rescue teams, self-sustaining with equipment;
- Mass Fatalities incident teams and equipment;
- Immediate aerial and/or sea support needed to resupply communities with water, food, shelter, and response personnel;
- Support needed for evacuations of special medical needs survivors, injured and vulnerable populations. Relocation of patients needing serious care (dialysis and other resource intensive procedures) to facilities outside of the impacted areas;
- Critical need of generator power and fuels. Most generators are not expected to survive event;
- Additional temporary sheltering, food and water supplies for displaced survivors and tourists; due to aftershocks and safety concerns, public buildings and schools may not be feasible to use immediately;
- Water purification equipment in all populated areas to provide potable water to survivors;
- Water purification equipment needed in all medical facilities;
- Sanitation facilities need in all populated areas;
- Supplies and equipment for bridging, road repair and debris removal;

1.2 Oregon Coastal Counties – Coos County

- Durable medical supplies and equipment for temporary hospital facilities;
- Supplies of pharmaceuticals for chronic medical conditions, including psychological and behavioral health needs;
- Security staff to safeguard local pharmacies, shelters, increased security at critical facilities and surviving food and water locations;
- Spontaneous volunteer management assistance and screening of volunteer skills and backgrounds;
- Screening capabilities for professional medical volunteers;
- Amateur radio equipment and antennae;
- Cell phone re-establishment (COW Cellular on Wheels);
- Immediate access to communication and information to allow survivors to communicate with family members outside of the area and provide reunification services.

Identified Mitigation and Pre-Event Preparedness:

- Cities with essential services and facilities in the tsunami inundation zone need assistance and financing to relocate these assets to City owned lands outside of the tsunami inundation zone;
- Increased coordination and/or agreements with the private sector to provide assistance post event;
- Continued neighborhood and community training with Citizen Corps, CERT, Map Your Neighborhood and similar programs for public awareness and personal preparedness.
- Funding to purchase water purification systems and water stores for hospitals and clinical medical facilities;
- Funding for storage facilities for food, water and sheltering supplies;
- Funding for individual community supply caches and storage containers to possibly include bottled water, water filter straws, shelter canopies, blankets, tarps, rain ponchos, survival food bars, sanitation supplies, and medical supplies;
- Special needs and long term care facilities need protocols and procedures for patient evacuation, patient sheltering and care;
- Continued funding for retrofitting and possible relocation of essential facilities in all areas;
- Agreements with the private sector to supplement and address: bridge engineering, safety assessment and temporary rebuilding of roadways. Private sector coordination with aerial support companies needed also;
- Surge capacities of local hospitals cannot handle the medical needs after this event. Pre-event purchase and storage of critical/essential equipment is needed;

1.2 Oregon Coastal Counties – Coos County

- There is a need for interoperable communications capability and equipment for County hospitals;
- Medical services needs water purification abilities and stored potable and sterile water;
- Funding for retrofitting local water infrastructure. Community water tanks and pipe network are not expected to survive earthquake;
- Retrofitting of clinics and ambulatory medical surgery centers;
- Increased communication abilities for Rural Fire Protection Districts and rural communities, especially in communities that are expected to be isolated in this event;
- Better communication abilities to provide medical services communication interoperability with county communications;
- Increased medical community plans for the evacuation and care of severely disabled/and non-ambulatory residents. These plans and protocols need to extend to in-home care givers, foster homes, and long term care facilities;
- Caches of pharmaceuticals needed including oxygen, insulin, Lasix, antibiotics, Coumadin, psychotropic drugs, meds and supplies for burns;
 - Generally patients needing these medicines are faced with challenges from insurance companies to have a 3 month supply on hand in case of emergencies. Pushing for changes from insurance companies to allow for emergency supplies of these items will increase the preparedness of communities greatly.
- Agreements with private security companies to provide security for pharmacies surviving the event to safeguard existing pharmaceuticals.

1.3 CURRY COUNTY OREGON

1.3 Curry County

Population: Approximately 22,364. Population as a result of tourism can increase during spring and summer months.

Incorporated Coastal Cities:

Brookings, Gold Beach, Port Orford

The executives of incorporated cities within Curry County are responsible for the direction and control of their community resources during emergencies.

Unincorporated Coastal Communities:

Harbor, Pistol River, Wedderburn, Nesika Beach, Ophir, Sixes, Denmark, Langlois

Major Rivers:

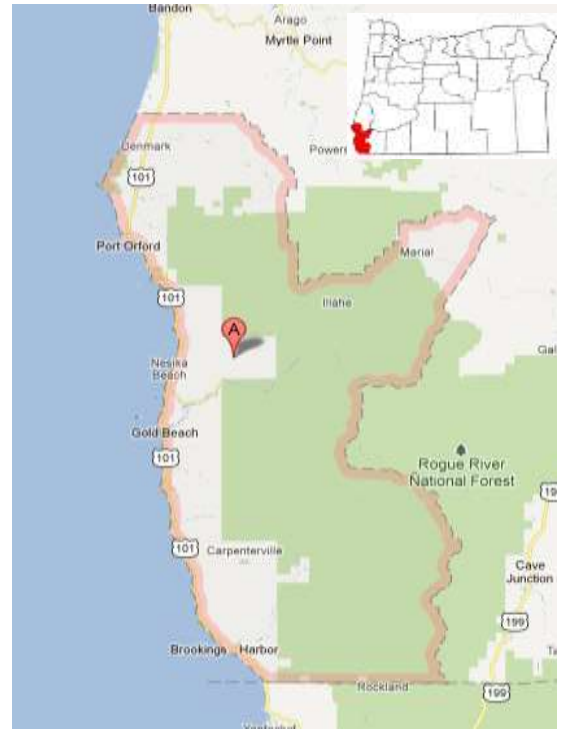
Rogue River near Gold Beach, Chetco River near Brookings

Local Response Support:

Emergency Management planning at the County level, Local Community level, and Special Service District level will commit all resources and services, if necessary, to accomplish the response priorities. Special Service Districts include: fire protection, water delivery, schools, and ports, Border Coast Regional Airport Authority and Curry Transit.

First Responder Agencies / Entities:

The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting the coastal areas of Curry County.



Cascadia Subduction Zone Plan - County Response Information Annex

1.3 Oregon Coastal Counties – Curry County

Emergency Management Services

Curry County Office of Emergency Management

Law Enforcement Services

Curry County Sheriff's
Department

Brookings Police
Department

Gold Beach Police
Department

Port Orford Police
Department

Fire Services

Brookings
RFPD

Gold Beach
Volunteer Fire Dept.

Port Orford
RFPD

Winchuck
RFPD

Ophir RFPD

Langlois RFPD

Ambulance Service

Cal-Ore Life Flight

Port Orford Community Ambulance, Inc.

Medical Services

Curry County
Public Health
(Gold Beach)

Curry General
Hospital (Gold
Beach)

Curry Medical Center
(Medical Clinic, Brookings)

Curry Family Medical Clinic
(Port Orford)

Emergency Communication Services

Curry County 9-1-1

Pelican Bay Amateur Radio Club (PBARC) Emergency (Emergency back up communications system)

Identified Community Points of Distribution Locations

Yet to be identified by County Emergency Management

Identified Emergency Mobile Home Staging Locations

Yet to be identified by County Emergency Management

County Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Curry County Office of Emergency Management, County Departments, Cities and volunteer organizations;
- All primary response staffs are trained and experienced in operating under NIMS and ICS;
- The County will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the State;

1.3 Oregon Coastal Counties – Curry County

- Given shortages of time, space, equipment, supplies and personnel during a catastrophic disaster, self – sufficiency will be necessary for an unknown amount of time that could range from several days to several weeks;
- The population of Curry County increases during peak tourist season reflecting an influx of tourists, seasonal residents, daily visitors, and recreation enthusiasts;
- Local emergency planning efforts should focus on accommodating residents while preparing for changes in populations trends throughout the year. Significant increases to the local population may introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;
- Response communication, equipment and work centers may be destroyed or rendered inoperable during a disaster;
- Effective response will need public officials, first responders, volunteers, and residents to be familiar with established policies and procedures, assigned pre-designated tasks, provided with evacuation and assembly instructions and formally trained in their duties, roles and responsibilities, required during emergency operations.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

Curry County will be fractured into pockets of isolated communities and neighborhoods due to the loss of roadways, bridges and communications capabilities. Impact predictions for Gold Beach, Port Orford and the Harbor community indicate that much of these communities will be destroyed by a Cascadia Subduction Zone tsunami inundation event. Individual pockets of survivors will be on their own for a time period of greater than 72 hours until communications and transportation between these pockets is reestablished.

Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and equipment. Total support will be needed for the most basic needs.

County Priorities:

Curry County

- Safety of emergency response personnel and their families. Response personnel will include fire, law enforcement, county public works personnel;
- Life saving and protection of property are response priorities;
- Stabilizing damaged public and private structures to facilitate search and rescue and/or protect the public's health and safety;
- Enact continuity of government protocols where appropriate;

1.3 Oregon Coastal Counties – Curry County

- Conduct unit reconstruction – recall of critical employees, and the collection, inventory, temporary repair and allocation of county assets;
- Identify and secure potable water resources, safe sheltering facilities, sanitation facilities, and food;
- Provide emergency food and temporary housing to survivors;
- Provide for the safety and security of fuel resources;
- Determine extent of damage to the following systems: transportation, water, solid waste, electrical, wastewater, and hazardous materials;
- County Roadmaster to assess road damage and determine needs for getting them cleared and accessible. Have working agreements with ODOT and could coordinate response efforts;
- Curry County will work with ODOT to conduct bridge damage assessments;
- Debris removal / clearance;
- Repair – maintain lifeline routes;
- Restoration of critical facilities.

Curry County Emergency Management

- Activation of the County EOC for the purpose of coordinating emergency response activities;
- Obtaining timely inventories of current resources and assets;
- Serving as primary point of contact for resource requests from County departments, cities, and the general public;
- Identifying facilities and services that are essential to the life of the community, and prioritizing for the repair and restoration of such vital facilities;
- Activation of intergovernmental agreements with neighboring jurisdictions for support;
- Establish contact with the State ECC for State and Federal assistance as needed.

Curry County Public Health

- Evacuation of Curry General Hospital which is located in the Tsunami Inundation Zone of Gold Beach;
- Providing emergency medical assistance to injured;
- Establishing temporary and ad hoc medical facilities to deal with medical surge;
- Assessment of public health and sanitation systems and identifying areas of concern;
- Inventorying, securing and prioritizing available pharmaceuticals and medical supplies;
- Providing crisis counseling and mental health services;

1.3 Oregon Coastal Counties – Curry County

- Coordinating and identifying individuals with special needs within the impacted area;
 - Agencies and organizations involved in managing, transporting and communicating with special needs populations:
 - Public Health,
 - Home Health and Hospice, Curry County Emergency Services,
 - Curry General Hospital, private clinics and care facilities throughout Curry County,
 - Curry Transit,
 - School districts and local radio stations serving Curry County.
- Providing mortuary Services;
- Animal and vector control.

Cities of Brookings, Gold Beach and Port Orford

- Safety of emergency response personnel and assets;
- Public safety and security;
- Assessment of city essential facilities for safety, usability and security;
- Establish continuity of government;
- Assessment of damage to critical infrastructure;
- Providing for the protection, management, distribution, and use of remaining resources;
- Coordinate operations with the civil defense/emergency service organizations of other jurisdictions;
- Establish a city Emergency Operations Center (EOC) from which city government can function efficiently during disasters;
- Provide coordinated direction and control for emergency operations within the City and initiate mutual support activity, among neighboring communities, Curry County and the State.

Available Assets:

Fire:

Coastal Rural Fire Protection Districts include: Cape Ferrelo RFP Department, Harbor RFPD, Winchuck RFPD, Ophir RFPD, Langlois RFPD, Sixes RFPD and Wedderburn RFPD.

Brookings Fire and Rescue is a full service emergency safety provider to a population of approximately 6,350.

Gold Beach Fire Department is a fire emergency safety provider to a population of approximately 1,900. The department provides structural fire protection with 18-25 voluntary fire fighters.

1.3 Oregon Coastal Counties – Curry County

Port Orford contracts with the Port Orford Rural Fire Protection District for fire services. It is a volunteer organization serving a population of 1,153 residents.

Law Enforcement:

Curry County Sheriff's Department provides 9-1-1 communications center, criminal division, civil division, wildland search and rescue and animal control.

The department also provides law enforcement assistance to other county agencies as needed.

Brookings Police Has a staff of approximately 13 sworn staff as well as reserve officers. The department provides 9-1-1 dispatch, patrol, K-9 unit, detectives, reserve officers and Volunteers in Policing Services.

Gold Beach Police supports the local police department with five officers, two reserve officers and Volunteers in Policing Services Program.

Port Orford Police provides three full time officers which are supplemented with reserve officers.

Curry County Public Health

- Curry County Health Department has two satellite phones;
- Department can provide some support for securing potable drinking water;
- Can assist with food safety issues;
- Medical Examiner provides birth and death certificates;
- Some additional first aid supplies are kept on hand. Hospital has mobile capabilities. Hospital Shelter tents are on a bus with some equipment and supplies;
- Health Department can conduct medical testing, some immunizations as well as limited capacity to provide additional medicine and supplies for first aid.

Additional County Capabilities:

- Brookings Airport located at 459' above sea level – out of the tsunami inundation level. Largest runway is 2,900' X 60' on good asphalt, built on bedrock;
 - Location: Lat: 42°04'28.4000 N; 124°17'.3380 West.
 - Airport is expected to survive a large magnitude earthquake and tsunami.
- Boats, 15,000 KV power generator, two 10 X 32' tents in trailers for sheltering. However these assets are stored at airport in Gold Beach, in the tsunami inundation zone;
- Mobile command Unit with radio capabilities;
- Curry County has identified six possible alternate EOC facilities;

1.3 Oregon Coastal Counties – Curry County

- Lobster Creek Youth Camp has camping areas with cabins, generator, water system, walk-in coolers. (Facility is located north of the Rogue River Bridge and would be inaccessible by anyone on the south side of the Bridge);
- Cranberry bogs located near cities have their own water systems and septic systems;
- Curry County CERT program which currently has 65 trained and equipped volunteers.

Catastrophic Event Operational Challenges:

- County assets, including the County Public Works yard (heavy equipment and generators) and an ODOT facility, that are stored in the Gold Beach area are in the tsunami inundation zone and are not expected to survive;
- The Southern Oregon Coast terrain can make evacuations difficult. Communities are located at sea level with the Coast Range and unimproved roadways to the east. Evacuees likely to be in improvised areas along hillside;
- Coastal communities of Gold Beach, Port Orford and the Harbor community will sustain severe damages according to this scenario;
- 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;
- Transportation damage will prevent responders not living near their facilities from reaching their work;
- Damage to transportation infrastructure reduces response capability and effectiveness;
- Evacuation routes that have been established have no facilities for evacuees;
- Much larger population with tourists, estimated that population is 50% greater than listed due to tourist population;
- With harbor damages the only viable method of support by sea is by air or with unimproved beach landings;
- Danger in ferrying people and resources across waterways impacted by tsunami and debris;
- High damage expected at public and response facilities - Driftwood Elementary, Port Orford Police Department, and Rural Fire District Office;
- Due to projected damage to transportation routes there will be no emergency medical capabilities north of Brookings to the Coos County border;
- Curry General Hospital is located in the tsunami inundation zone;
- Hospital sheltering, food and medical supplies are in a bus and capable of moving and setting up alternate medical facilities. The bus is stored at the

1.3 Oregon Coastal Counties – Curry County

hospital in the inundation zone. The ability of moving bus to a safe location out of the inundation area is questionable;

- Lack of clean water will limit the ability to medically treat survivors;
- Medical facilities may not be able to provide more advanced care due to conditions;
- Limited ability of those needing medical care to get to medical facilities in County, no ability to move those needing severe care (burn victims, dialysis, etc.);
- Water system for fire suppression will likely not survive, draft sites where they can pump is unlikely to be accessible due to mud;
- Search and rescue teams are trained for wildland SAR only. They will provide as much assistance as possible for urban search and rescue (some cross trained in CERT).

Support Needed Immediately After a Catastrophic Event:

- Need replacement trained and equipped response personnel from outside the area(s) beyond 72 hours for urban search and rescue, law enforcement, fire response, debris removal and restoration of lifeline roadways;
- Immediate aerial or sea re-supply of external resources for life sustainment. Food, water and shelter needs will be much greater than Curry County can provide for due to tourist impacts;
- Aerial or sea evacuation of injured, vulnerable populations and tourists;
- Water purification equipment needed in all populated areas to provide potable water to survivors;
- Fuel – diesel, gasoline, propane;
- Communication system power, support and repeaters to maintain response;
- Sanitation needs;
- Supplies and support for residents to shelter in place;
- Additional fire/rescue equipment and replacement parts;
- Need support and temporary shelter (tents, larger gathering tents for many people) for survivors. Due to aftershocks and safety concerns, school facilities not feasible to re-shelter immediately;
- Durable medical goods and pharmaceuticals for chronic illnesses;
- Need additional supply caches for medical goods and pharmaceuticals;
- Assistance and transportation relocation of patients needing serious care (dialysis and other resource intensive procedures);
- Medicines for psychological and behavioral health needs;

1.3 Oregon Coastal Counties – Curry County

- Psychological first aid training for responders and shelter staff;
- Security staff for shelters and increased security presence at critical facilities (infrastructure, fire stations, pharmacies and surviving food locations);
- Ability to screen volunteers and shelter populations to provide security for shelters;
- Immediate access to communication and information to allow survivors to communicate with family members outside of the area and provide reunification services;
- Need support and temporary shelter (tents, larger gathering tents for many people) for survivors. Due to aftershocks and safety concerns, school facilities and other survivor locations are not feasible to re-shelter immediately;
- Engineering assets / bridge inspectors.

Identified Mitigation and Pre-Event Preparation:

- Procure property out of the tsunami inundation areas both north and south of the Rogue River to stage essential resources and supplies;
- Identify location to cache and space to deploy mobile hospital facilities and supplies;
- Curry County Public Health / Curry General Hospital need an updated emergency operations plan and an evacuation plan;
- Seek funding to retrofit or relocate buildings and/or infrastructure at risk of damage in a high magnitude earthquake. Federal grant funding has been denied for public buildings in the tsunami inundation areas of Curry County coastal communities due to their low percentage survivability from a tsunami;
- Relocation of critical facilities and motor pools outside of the inundation area;
- Volunteer management protocols for locals;
- Donations management protocols for locals;
- State assistance and support of counties for continued COOP planning and resources;
- Agreement on standards for alternate catastrophic medical response protocols to deal with scenario;
- Pre-planning of impact on and response to vulnerable populations;
- Planning on what chronic care needs will be needed based on population in the County;
- Funding for individual community supply caches, similar to that described on the next page, to include shipping container or similar large survivable storage device;

1.3 Oregon Coastal Counties – Curry County

Seagrove Community 250 Person Disaster Supply Cache				
	Quantity	Price	Total Price	Comments
WATER				
Bottled Water	250	\$ 0.20	\$ 50.00	
Water Filter Straws	250	\$ 6.00	\$ 1,500.00	Filter 20 gallons/water per straw
55-gallon Water Barrels	8	\$ 80.00	\$ 640.00	1/2 gallon water per person for 3 days
SHELTER				
10 x 20 Steel Frame Canopy	10	\$ 199.00	\$ 1,990.00	Sleeping Quarters (Costco)
32 x 16 Steel Frame Canopy	2	\$ 479.00	\$ 958.00	1 Medical Treatment Area, 1 Gathering/Eating Area (acscanopy.com, amazon.com)
Mylar Blankets	250	\$ 1.00	\$ 250.00	
Rain Ponchos	250	\$ 0.50	\$ 125.00	Outer Store
Tarps	20	\$ 10.00	\$ 200.00	Floors for Canopies (Costco)
MEDICAL 500 Person Trauma Medical Kit	1	\$ 1,050.00	\$ 1,050.00	EO Management (100 person kit is \$400)
FOOD Survival Food Bars	1000	\$ 3.50	\$ 3,500.00	3000 calorie food bars, perforated (EO Management)
SANITATION Toilet Kits	12	\$ 20.00	\$ 240.00	5 gallon bucket w/liner, toilet lid, toilet paper, hand sanitizer, & disinfectant
SEARCH & RESCUE KIT	1	\$ 500.00	\$ 500.00	4 person professional rescue kit (EO Management)
CONTAINER (20 foot steel storage container)	1	\$ 3,795.00	\$ 3,795.00	Weather proof, tamper proof (Ace Hardware)
TOTAL			\$ 14,798.00	
ASSUMPTIONS:				
Hypothermia is a significant threat.				
Hundreds of aftershocks will discourage people from staying in homes that aren't destroyed in the initial earthquake (psychological barriers, structural barriers)				
Water and Shelter are the highest survival needs.				
Supplies (food, shovels, clothing, etc) will be able to be collected from homes that aren't destroyed.				
Other Needs:				
Pet Supplies (leashes, food, carriers)				
Rope/Stakes/Hammer				
Lanterns/Flashlights				
Stocking caps/gloves				

- County and State need knowledge of nightly occupancy of hotels in order to plan more effectively for needs of tourists;
- Policies and procedures for identifying and credentialing useful volunteers that are spontaneous and not affiliated with County emergency response volunteer groups.

1.4 COASTAL DOUGLAS COUNTY OREGON

1.4 Coastal Douglas County

Population: The Douglas County coastal area population is approximately 6,413 persons, and as a result of tourism could be twice that or more during peak tourist seasons.

The county has an area of 5,134 square miles. Douglas County extends from the Pacific Ocean to the Cascade Range. This document focuses primarily with coastal Douglas County (Scottsburg to the Pacific Ocean). As the most populous City, some information from the City of Roseburg is included. There will be a follow up annex for eastern Douglas County in the near future.

Incorporated Coastal

Cities: City of Reedsport

The executives of incorporated cities within Douglas County are responsible for the direction and control of their community resources during emergencies and will coordinate response with County Emergency Management.

Unincorporated Coastal Communities: Winchester Bay, Gardiner, Scottsburg

Major Rivers: Umpqua River, Smith River

Local Response Support: Through existing emergency management planning and agreements, The Salvation Army, Sheriff's Posse, Douglas County Search and Rescue Team, Douglas County Community Emergency Response Teams (CERT), other volunteer groups and private contractors are available to assist and supplement local response and recovery operations.

First Responder Agencies / Entities:

The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting the coastal areas of Douglas County:

Coastal Douglas



Cascadia Subduction Zone Plan - County Response Information Annex

1.4 Oregon Coastal Counties – Coastal Douglas County

Emergency Management Services

Douglas County Office of Emergency Management

Law Enforcement Services

Douglas County Sheriff's Department

Reedsport Police Department

Oregon State Police

Fire Services

Western
Douglas/Lane
County Fire
Defense Board

Roseburg Fire
Department
(HazMat)

Coos Forest
Protective
Association

Reedsport
Volunteer
Fire
Department

Gardiner
Rural Fire
Protection
District

Winchester
Bay Rural Fire
Protection
District

Ambulance Services

Lower Umpqua EMS - 2 ALS ambulances operated from the Lower Umpqua Hospital, Reedsport

Public Health and Hospital Services

Douglas County Public
Health

Lower Umpqua Hospital
(Reedsport)

Mercy Medical Center
(Roseburg)

Peace Health Hospital in Florence and Bay Area Hospital in Coos Bay are both significantly closer than Roseburg.

Emergency Communications Services

Douglas County Emergency Communications 9-1-1 Center

City of Reedsport Communications

Identified Community Points of Distribution and Mobile Home Staging Locations *** All of these locations are located in the tsunami inundation zone. Coastal Douglas County has no other areas that meet the criteria. ***

International Paper Company Site-Old Hwy
101 Gardiner OR 97441

43° 44' 32.38" N, 124° 06' 51.30" W

**Site for both C-POD and mobile home staging*

Bolon Island- American Bridge Manufacturing-
135 American Bridge Way, Reedsport OR 97467

43° 42' 52.74" N, 124° 06' 03.20" W

**Site for both C-POD and mobile home staging*

Douglas County Stockpile, Site east side of
Bolon Island

43° 42' 49.27" N, 124° 05' 50.60" W

**C-POD Only*

Reedsport Real Estate Development, LLC
711 Port Dock Road, Reedsport OR 97467

43° 42' 21.19" N, 126° 06' 22.01" W

1.4 Oregon Coastal Counties – Coastal Douglas County

	(McIntosh Slough area, owned by Mast Bros.) <i>*Site for both C-POD and mobile home staging</i>

County Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Douglas County Office of Emergency Management, County Departments, Cities, volunteer organizations, and the private sector;
- All primary response staff are trained and experienced in operating under NIMS and ICS;
- The County will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the state;
- The county is minimally prepared to carry out disaster response on an event of this magnitude;
- The County will use all available local resources, including mutual aid and cooperative assistance agreements, before requesting assistance from state and federal resources;
- Douglas County's population can increase at various times during the year from an influx of tourists, seasonal residents, visitors, and recreation enthusiasts.
- Local emergency planning efforts will focus on accommodating residents while preparing for changes in population trends throughout the year. However, significant increases to the local population will introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;
- Given shortages of time, space, equipment, supplies, and personnel during a catastrophic disaster, self-sufficiency (for local governments and population at large) will be necessary for an unknown amount of time that could range from several days to several weeks;
- Wheeled-vehicle access may be hampered by bridge failures, washed out roads, and landslides, making conventional travel to any area heavily impacted impossible;
- Communities will be isolated and mostly inaccessible;
- Emergency response will be heavily impacted due to the probable loss of bridges creating three pockets of isolated areas along the Douglas County coast. Gardiner and north, Reedsport north of Scholfield Creek, Reedsport south of Scholfield Creek to include Winchester Bay and possibly the Lakeside area which is in Coos County;
- Response and recovery resources located in tsunami inundation area will likely be lost if they cannot be moved to higher ground rapidly. Resources located on liquefiable soils will also likely be lost or severely damaged;

1.4 Oregon Coastal Counties – Coastal Douglas County

- U.S. Coast Guard resources in Winchester Bay will be lost if they cannot be moved out to sea rapidly;
- Emergency response personnel will be impacted due to road and bridge damage and the inability to reach areas of the community or report for duty;
- Winchester Bay (Salmon Harbor) will be inaccessible due to debris;
- Current demographics of area contain a large number of older residents and emergency response personnel. This increases the challenge of responding and caring for that population.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

Douglas County coastal communities will be cut off from assistance coming from I-5 and central Douglas County. The coastal areas will most likely be isolated into four distinct areas due to damaged bridges and roadways (Winchester Bay, South Reedsport, North Reedsport and Gardiner). These isolated communities will be without emergency support until communications and transportation between them is reestablished. The coastal section of Douglas County will most likely be isolated from assistance north/south as well. Not only will be isolation between these sub areas but the coastal area will most likely be isolated from the Interstate 5 (I-5) corridor where the most quantity of services and resources are located.

Emergency services will be immediately overwhelmed. Communities will likely be isolated for a time period much greater than 72 hours.

Salmon Harbor, which is one of the larger recreational facilities on the Oregon Coast, would be severely impacted and possible loss of life would be significant. Debris would be significant and hinder response into the area.

County Priorities:

Douglas County Sheriff's Office

- Ensure safety of County response personnel;
- Assess safety, usability and security of facilities;
- Enact continuity of government protocols where appropriate;
- Support short term lifesaving and shelter needs of impacted population;
- Clearing life line roadway routes from coastal areas to I-5 corridor for supplies and evacuations;

Douglas County Emergency Management

- Ensure safety of facilities and staff;
- Contact County-wide AOCs and impacted areas to get situational awareness and identify needs;

1.4 Oregon Coastal Counties – Coastal Douglas County

- Coordinate response with multiple impacted sites and limited resources;
- Contact State ECC to coordinate the provision of essential needs through county, state and federal resources.

Douglas County Public Health

- Assure safety staff and usability of facilities and assets;
- Establish contact with county medical facilities to obtain a status and determine needs;
- Coordinate with County Emergency Management to be able to maximize limited resources, determine capabilities, address needs and deliver assistance.

City of Reedsport

- Safety of response personnel including fire, police, public works;
- Assess safety, usability and security of City facilities;
- Enact continuity of government protocols where appropriate;
- Public safety and security;
- Establish search and rescue operations;
- Safety assessment of pre-designated sheltering facilities;
- Adapt to ongoing situations as they arise to continue life/safety missions;
- If possible, recover essential fire and police equipment and resources from impacted areas;
- Establish traffic safety zones on major roadways;
- If possible, take steps to prevent possible flooding from levee breaches;

Available Assets:

Fire: (Responses for all fire districts were similar; information includes coastal Douglas County, Reedsport, Winchester Bay, and Gardiner.

Winchester Bay RFPD – Has one fire station staffed with approximately 22 volunteer firefighters (some with EMT certifications). The station and staff serve a population of approximately 382 which can double during peak tourist season. The Winchester Bay Fire Station has a “Moderate” collapse potential, per DOGAMI SB2 assessment, it is also in the inundation zone.

Reedsport Fire Department – has two fire stations staffed with approximately 41 volunteers specializing in firefighting, rescue, hazardous materials incidents, special assignments, and fire prevention education. The department has a fully functioning EOC with 72 hour emergency power and local, county and state communications capability, including ham radio and satellite internet. Douglas County Emergency Management has established an agreement with the City of Reedsport to use Fire Station #2 as a Western Douglas County Area Operations Center. There are county and coastal mutual aid agreements in place. Additional assets include 1000 sandbags, and 9 portable

1.4 Oregon Coastal Counties – Coastal Douglas County

generators. Station 1 has a “High” collapse potential, per DOGAMI SB2 assessment. Station 2 has a “Low” collapse potential, per DOGAMI SB2 assessment.

Gardiner RFPD –The Gardiner fire station provides fire suppression for a rural community of approximately 248 residents. Staffed with nine personnel (volunteer), and equipped with two Class A fire engines, one quick attack, one pick-up truck, 2x2 kilowatt Honda generators. The fire station is located well inside the inundation zone. The Gardiner Fire Station has a “High” collapse potential, per DOGAMI SB2 assessment.

Health Care:

Douglas County Health Department – provides numerous public health programs as well as interfacing with the coastal medical services. The Lower Umpqua Hospital District in Reedsport provides a full service medical facility with a 56 bed capacity. The Hospital District provides an Adult Level IV Trauma Center and two ALS ambulances that operate from the hospital. Lower Umpqua Hospital has a “Gate Keeper II” mobile medical hospital sheltering facility. Additionally, there is a rural health care clinic in the north Reedsport area. The building that houses the Health Dept. has a “High” collapse potential, per DOGAMI SB2 assessment.

Lower Umpqua Hospital - Two of the three buildings at Lower Umpqua Hospital are rated as having a “High” collapse potential, per DOGAMI SB2 assessment. The only building with a “Low” rating is the ambulance garage and office.

Law Enforcement

Douglas County Sheriff’s Department has assigned four to five resident deputies to the coastal area. The deputies provide law enforcement to the Gardiner and Winchester Bay unincorporated communities, and areas not served by municipal police. The building that houses the Sheriff’s Office has a “High” collapse potential, per DOGAMI SB2 assessment.

Oregon State Police has assigned approximately three to five officers to the coastal Douglas County area at any given time. Most are based out of Coos Bay and may not be able to assist in Douglas County due to damaged roadways.

Reedsport Police Department provides one or two officers on duty at all times. The department has received grant funds for a communications trailer. The plans for building the trailer are currently being finalized. The trailer will be equipped with a mobile repeater system for interoperable communications systems as well as being able to back up the cities secondary PSAP. The Reedsport Police Department building has a “High” collapse potential, per DOGAMI SB2 assessment.

Additional Coastal County/Agency Capabilities:

Oregon State Parks – The Umpqua Lighthouse State park is on high ground out of the tsunami inundation zone. There is some large equipment available and there is fuel stored on the premises. Other state parks in the area have sheltering capabilities with yurts and cabins. Generally located near fresh water lakes, these parks can be used as staging or command areas. The American Red Cross currently has a 100 person sheltering trailer staged at Honeyman State Park in Lane County.

1.4 Oregon Coastal Counties – Coastal Douglas County

US Coast Guard Station Umpqua River – Has 43 personnel, many living near the Umpqua Lighthouse. Boats available to the USCG include: two 47 foot motor lifeboats (MLB), one 25 foot response boat (safeboat). The USGS has various generators and pumps at their facilities. The Coast Guard is capable of navigating waterways that contain debris.

Air support is based at the North Bend Airport Coast Guard Station (Coos County) 22 miles to the south.

The first USCS priority will be getting MLB's out to sea at least 900 meters (6/10 of a mile) if possible and moving other resources to higher ground. USCG will establish a command post at the Umpqua Lighthouse which offers an unobstructed view of the Umpqua Bar. MLB's will return to port after "all clear" is determined and begin providing near shore search and rescue and ATON (Aids to Navigation) survey of the area.

City of Reedsport

- City public works assets, county public works assets and ODOT coastal assets are located in a centralized area;
- Fuels for these assets are centrally located;
- Schools are located on high ground and can be used as shelters if not heavily damaged;
- Schools have an alert system for contacting parents should an event happen and immediate parental pick-up becomes necessary;
- School yards and properties can be used for staging areas;
- Schools in Reedsport are located on high ground and can shelter up 200 people;
- City of Reedsport owns the Cruse Memorial Hospital Heliport (near Lower Umpqua Hospital): Latitude; 43°41'41.419", Longitude; -124°08'16.408".
- Emergency Management has positioned a 40' container with first aid supplies, blankets, cots and CERT equipment.

Additional Community Assets:

- Reedsport churches can be used as shelters provided they are determined to be safe. Some have commercial sized kitchens;
- Local lumber companies may have cold storage capabilities, and some generators;
- Clear Lake, south of Winchester Bay is the main water supply for the area and the water is relatively pure, but a challenge would be getting it to residents after the event.

Catastrophic Event Operational Challenges:

- Most of the support to Coastal Douglas County will come from the City of Roseburg and the bulk of county resources reside in Central Douglas County. Roads to the coastal areas are likely to be damaged and impassable.

1.4 Oregon Coastal Counties – Coastal Douglas County

- Roseburg will deal with local issues first and provide support to outlying coastal communities as practical and capable. The Umpqua River and Deer Creek run through the middle of Roseburg and the city may be faced with local isolation due to collapsed bridges and damaged infrastructure.
- City of Roseburg houses the State Hazardous Materials Team #1 – DC HazMat
- Douglas County assets based along the I-5 corridor – will be cut off and the county will not be able to get equipment, supplies and personnel into the coastal areas.
- Douglas County, ODOT, and City public works and road assets maintained at the county yard in Reedsport are in an area that would be isolated due to bridge and road failure and may be in the tsunami inundation area;
- Much larger population with tourists, Estimated that population is 50% greater than listed due to tourist population;
- Tourists are primarily visitors from other locations in Oregon and the Northwest USA. Due to impacts in their own jurisdictions, it could be a challenge returning them to their homes;
- Large elderly population evacuating by foot over uneven terrain will be extremely challenging;
- The only viable method of support by sea is by air or with unimproved beach landings until assessments/repairs to port infrastructure can be made;
- With the exception of fuels for marine craft – most of the fuel required for generators for government buildings and medical facilities is propane. Propane delivery for generators will be impaired due to road and bridge damage;
- Access to fuel, even if underground tanks are intact will be difficult;
- Port of Umpqua – has fuel storage for boats. The harbor and marina will be heavily impacted by the earthquake and tsunami. The channel can only accommodate shallow draft boats as it has not been dredged in many years. It is extremely likely that marine assets and fuels will be lost in this event;
- Community medical and food resources (grocery stores) will be only be accessible to those in the south end of Reedsport if the Schofield Creek bridge fails;
- Probable collapse of the Hwy. 101 Bridge over the Umpqua River and Smith Rivers to the north and south of Bolon Island, and the Schofield Creek bridge in Reedsport will divide Coastal Douglas County into three geographically isolated sections and will severely impact any emergency response;
- OR Highway 38, a vital lifeline to central Douglas County, is extremely susceptible to landslides, sink holes and debris flows. In wet weather these dangers, in addition to the possible collapse of the Mill Creek Bridge near Loon Lake due to the earthquake, will limit access to Coastal Douglas County significantly.

1.4 Oregon Coastal Counties – Coastal Douglas County

- Danger in ferrying people and resources across waterways impacted by tsunami and debris;
- One of the fire stations in Reedsport (124 N. 4th St.) is located in the tsunami inundation zone resulting in the probable loss of two of the city's four fire vehicles and equipment;
- Very limited manpower for an extended incident;
- Very limited CERT and Red Cross personnel in the area;
- Spontaneous volunteer management and safety;
- Very limited heavy equipment capability for search and rescue in major collapse zones.
- Due to isolated areas of the communities – some personnel will be unable to respond to their jurisdictional duty stations;
- US Coast Guard – based on event assumptions the Winchester Bay facility will likely be destroyed in a major event. All Motor Lifeboats are expected to be lost. Command and control will be provided by Coast Guard Group North Bend, provided that their facility survives;
- Coastal community churches that can be used as shelters have no generator power;
- Coastal Douglas County demographics contain a large portion of the population being elderly;
- The depressed economy and high poverty rate in Coastal Douglas County limit preparedness opportunities for that population.

Support Needed Immediately After a Catastrophic Event:

- Shelter for population (especially if weather is inclement), drinking water, food and sanitation;
- Will need replacement trained and equipped response personnel from outside the area(s) beyond 72 hours to supplement law enforcement, fire, urban search and rescue;
- Any responding personnel/teams will need to be completely self-supporting as any supporting infrastructure will be compromised;
- Immediate aerial or sea resupply of external resources for life sustainment. Food, water and shelter needs will be much greater than Coastal Douglas County can provide for. If during tourist season situation will be exacerbated;
- Aerial or sea evacuation of injured, vulnerable populations and tourists;
- Water purification equipment needed in all populated areas to provide potable water to survivors;
- Fuel – Diesel, gasoline, propane;
- Communication system power, support and repeaters to maintain response;

1.4 Oregon Coastal Counties – Coastal Douglas County

- Safe and secure buildings and shelters;
- Aerial support needed for evacuations of special medical needs survivors, injured and vulnerable populations;
- Relocation of patients needing serious care (dialysis and other resource intensive procedures);
- Water purification equipment needed at medical facilities;
- Sanitation facilities needed in all populated areas and schools;
- Temporary sheltering, food and water supplies. Due to aftershocks and safety concerns public buildings and schools may not be feasible to use immediately;
- Durable medical supplies, equipment, personnel and temporary hospital sheltering facilities;
- Supplemental law enforcement personnel to safeguard local pharmacies, shelters, and provide increased security at critical facilities, and surviving food and water locations;
- Mass fatalities equipment and support;
- Personnel capable of bridge and road damage assessment to determine safety and usability;
- Immediate access to communications and information to allow survivors to communicate with family members outside of the area and provide reunification and/or evacuation services;
- Supplies and support for residents to shelter in place;
- Additional fire/rescue equipment and replacement parts;
- Durable medical goods and pharmaceuticals for chronic illnesses;
- Need additional supply caches for medical goods and pharmaceuticals;
- Psychological first aid training for responders and shelter staff;
- Medicines for psychological and behavioral health needs.

Identified Mitigation and Pre-Event Preparation:

- Relocation of essential services and equipment currently located in the tsunami inundation zone;
- Need to identify and establish pre-designated and safe staging areas for essential equipment, and services;
- Fortify the bridge at the entrance to Salmon Harbor to withstand earthquake so people have an evacuation route;
- Create hiking trails that lead up the bluff on the south side of Salmon Harbor for a secondary evacuation route;
- Need additional satellite phones and communications equipment for responding agencies and medical facilities;

1.4 Oregon Coastal Counties – Coastal Douglas County

- Need guidance on policy and procedures for dealing with the mass fatalities;
- Funding for increased public education and preparedness;
- Train coastal and tourist population in evacuation procedures and preparedness;
- Policies and procedures for identifying and credentialing useful volunteers that are spontaneous and not affiliated with county emergency response volunteer groups;
- Contact and coordination with local contractors to possible aid in road reconstruction, building safety assessment and other post-event needs;
- Volunteer programs (Citizen Corps) need continued funding, increased training of volunteers and increased footprint to prepare community and increase readiness for such an event;
- Need funding for training in shelter management to augment the American Red Cross resources;
- Agreement on standards for alternate catastrophic medical response protocols to deal with scenario;
- Additional 100 person sheltering trailer to be staged at Umpqua Lighthouse State Park;
- Pre-planning of impact on vulnerable populations and what they will need in post-event;
- Funding for individual community supply caches;
- Promote use of and assistance in provision of Personal family supplies;
- Continued discussion and emergency management coordination and planning with locals, State and Federal agencies;
- Need continued funding for retrofitting of critical facilities;
- Funding for storage facilities for sheltering supplies for population, drinking water, food and sanitation
- Funding for individual or community supply caches and containers to include water, water filtering equipment, shelter, blankets, tarps, rain gear, food, sanitation and medical supplies.
 - Any storage or caching of supplies need to be in a survivable container / device
- Identified needs in:
 - planning, training and exercises of a catastrophic scenario;
 - coordination and communication of response services,
 - Clarification of command and control issues between city and county administered unincorporated areas.

1.4 Oregon Coastal Counties – Coastal Douglas County

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1.5 COASTAL LANE COUNTY OREGON

1.5 Coastal Lane County

Population: Lane County's population is approximately 351,715; however that includes the entire County. Coastal Lane County's population is approximately 25,000.

Incorporated Coastal Cities: Florence

The executives of incorporated cities within Lane County are responsible for the direction and control of their community resources during emergencies.

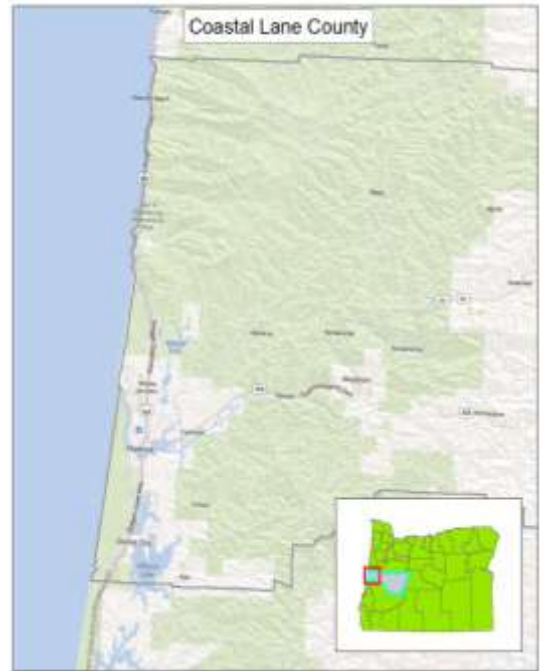
Unincorporated Coastal

Communities: Dunes City, Glenada

Major Rivers: Siuslaw River

Local Response Support: Through extensive emergency management planning both at the County and local community levels, coastal resources include incorporated cities, rural coastal communities, school districts, rural fire protection districts, and the private sector. Planning encompassing all response efforts are organized under the Lane County Office of Emergency Management and the Western Lane Emergency Operations Group.

First Responder Agencies / Entities: The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting the coastal areas of Lane County.



Cascadia Subduction Zone Plan - County Response Information Annex

1.5 Oregon Coastal Counties – Coastal Lane County

Emergency Management

Lane County Office of Emergency Management

Law Enforcement Services

City of Florence Police Dept.

Lane County Sheriff's Dept.

Oregon State Police

Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians

Fire Services

Siuslaw Valley Fire & Rescue District

Ambulance Service

Western Lane Ambulance Service

Public Health and Hospital Services

Lane County Department of Public Health

Peace Harbor Hospital (Florence)

Emergency Communications Services

Lane County 9-1-1

Siuslaw Valley Fire & Rescue – Secondary PSAP

Identified Community Points of Distribution Locations

Yet to be identified by Lane County.

Identified Emergency Mobile Home Staging Locations

Yet to be identified by Lane County.

County Response Assumptions:

- An event of this magnitude will require prompt and effective response and recovery operations by Lane County Office of Emergency Management, County Departments, Cities, volunteer organizations and the private sector;
- All primary emergency response staff are trained and experienced in operating under NIMS and ICS;
- The county will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the State;

1.5 Oregon Coastal Counties – Coastal Lane County

- Due to post-event logistics challenges, personal self-sufficiency for the population may be necessary for an unknown amount of time that could range from several days to several weeks;
- The population of Coastal Lane County increases dramatically during peak tourist season and other times of the year;
- Significant increases to the local population may introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;
- Effective response will need public officials, first responders, volunteers, and residents to be familiar with established policies and procedures, assigned pre-designated tasks, provided with evacuation and assembly instructions and formally trained in their duties, roles and responsibilities, required during emergency operations;

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

- Coastal Lane County will be fractured into pockets of isolated communities and neighborhoods due to loss of roadways, bridges, communication, and tsunami flooding;
- Individual pockets of survivors will be on their own for a time period of much greater than 72 hours until communications and transportation between these pockets is re-established;
- Many locations will be without emergency support of fire, law enforcement, and ambulance service until communication and transportation between these pockets is re-established;
- Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and resources;
- Self-sufficiency will be necessary for an unknown amount of time that could range from several days to several weeks given the shortages of time, space, equipment, supplies and personnel during a catastrophic event;
- Response communication, transportation routes, equipment, and certain critical facilities may be destroyed or rendered inoperable during a disaster;
- Critical infrastructure and services will be crippled as well as transportation routes and the ability of essential personnel to respond;
- Essential emergency response personnel staffing level is expected to be reduced by half;
- Effective response will need public officials, first responders, volunteers, and residents to be familiar with established policies and procedures assigned and

1.5 Oregon Coastal Counties – Coastal Lane County

pre-designated tasks, provided with evacuation and assembly instructions and formally trained in their duties, roles and responsibilities required during emergency operations;

- Emergency response and medical capabilities will be immediately overwhelmed;
- Critical communications will be heavily impacted if not totally disabled;
- Assistance from Lane County non-coastal resources from the Eugene area will be cut off due to road damage, bridge damage and slides, and unable to provide additional personnel, equipment and essential resources.

Coastal Lane County Priorities:

Lane County Road Master

- Assess road damage and determine needs for getting them cleared and usable;
- Work with ODOT to provide road and bridge damage assessments;
- Assist with debris removal;
- Repair and maintain lifeline routes.

Lane County Public Health

As the local public health authority, Lane County Public Health (LCPH) is responsible for assuring the essential services of public health for all of Lane County.

Lane County Health and Human Services will coordinate the provision of public health and medical services in most impending or actual health emergencies affecting Lane County.

Priorities:

- Assess and determine safety and usability of County Health Department staff and assets;
- Establish contact with Peace Harbor Hospital and other medical providers to determine status and needs;
- Coordination with County Emergency Management to be able to maximize limited resources to address needs.

Peace Harbor Hospital

- Ensure safety of patients and staff;
- Follow evacuation plan and be aware of routes;
- Development of incident command system, which will help establish priorities while using previously identified communications pathways and tools;
- Determine facility functionality and sheltering capacity.

City of Florence

- Ensure safety of emergency response personnel and assets: fire, police, public works, and enact continuity of government protocols if needed;
- Ensure public safety and security;

1.5 Oregon Coastal Counties – Coastal Lane County

- Search and rescue, medical services, evacuation and/or sheltering;
- Building officials will prioritize assessment of shelters, safety of schools and government operational facilities;
- Public works to assess damage to critical utility services.

Confederated Tribes of Coos, Lower Umpqua & Siuslaw

- Ensure the safety and security of Tribal members, assets and properties and provide emergency support.

Available Local Assets:

Fire

Siuslaw Fire & Rescue District

- The District provides emergency response to approximately 25 thousand coastal lane county residents;
- The district is staffed with 12 full-time employees, 18 part-time and approximately 60 volunteer firefighters. Some staff members are certified EMT's;
- Personnel family plans exist for employees;
- The district supports eight fire stations throughout Western Lane County;
- Provides secondary emergency medical response, search and rescue; wildland search and rescue assistance for the Sheriff's Department and marine / water rescue with a twin engine 25' Zodiac boat. The District also has some human powered watercraft such as kayaks;
- Fire and EMS services are also provided to Dunes City, and the unincorporated area of Glenada located just south of Florence;
- Western Lane Ambulance Service provides six ambulances to Coastal Lane County.
- Coastal Lane County has trained and equipped CERT teams;
- The district has some satellite phone capability.

Law Enforcement

- The **Lane County Sheriff's Department** is headquartered in Eugene. Deputies are assigned to the coastal areas for dune patrol and law enforcement activities to the unincorporated areas of the Lane County coast;
- **Florence Police Department** supports 14 full time law enforcement staff and four reserve officers which serve approximately 8,466 residents;
- **Oregon State Police** is based in Coos Bay and generally provides four to five troopers to the area;

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- **Confederated Tribes of Coos, Lower Umpqua & Siuslaw** employ two peace officers for the protection and law enforcement for tribal members, lands and assets.

Lane County Health Department

Capabilities:

- The ability to direct and support an event or incident with public health or medical implications by establishing an organization and supervision structure consistent with the National Incident Management System;
- Emergency Public Information and Warning: ability to develop, coordinate, and disseminate information, alerts, warning, and notifications to the public and incident management responders;
- Information Sharing: ability to conduct multijurisdictional exchange of health related information and situational awareness data among state and local governments and private sector;
- Medical Countermeasures Dispensing: ability to provide medical countermeasures (including vaccines, antiviral drugs, antibiotics, etc.) in support of treatment of the populations;
- Prioritize requests for health, medical, and behavioral health services, and coordinate their delivery through the Lane County Emergency Operations Center;
- Medical Materiel Management and Distribution: ability to acquire and maintain, transport, distribute, and track medical material during an incident;
- Perform epidemiological surveillance, case and outbreak investigation and follow-up;
- Initiate appropriate preventive health measures to control and prevent the spread of communicable diseases;
- Provide education to responders and public to prevent or control vectors such as insects or rodents;
- Provide for the monitoring and evaluation of environmental health risks or hazards as needed and ensure that appropriate actions are taken to protect the health and safety of disaster victims, responders, and the general public;
- Locate, receive and coordinate equitable distribution and administration of vaccine and chemoprophylaxis medications, if needed and as available;
- Coordinate the collection and submission of samples to the Oregon State Public Health Lab (OSPHL) for appropriate testing;
- Monitor food handling and mass feeding and other sanitation elements in emergency shelters;
- Work with local utilities and State of Oregon Drinking Water program to provide information on safe water treatment and/or access to safe drinking water;

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- Coordinate with Lane County Public Works, Land Management Division and the Eugene/Springfield water pollution control facility to assure the availability of proper sewage disposal facilities and waste and refuse disposal practices;
- Provide public health updates to partners. Advise the public and partners on such matters as emergency water supplies, waste disposal, mass feeding services, vectors, food safety, immunizations, disinfection, isolation and quarantine;
- Provide education and guidance as necessary for the protection of medical responders;
- As possible, collect and provide information on the number of injuries, illnesses and deaths related to the emergency;
- Non-pharmaceutical interventions: ability to recommend and implement strategies for disease, injury and exposure control;
- Public Health Surveillance and Epidemiological Investigation: the ability to create, maintain, support, and strengthen surveillance and detection systems and epidemiological investigation to prevent, detect, control and stop the spread of disease, illness, or injury.

Assets:

- Trained public health professionals including: public health officer, public health nurses, environmental health specialists, health educators, and dietitians;
- Mutual aid agreements with neighboring counties for public health personnel and other resources;
- Active relationships with community based organizations, hospitals and healthcare systems;
- Established coordination, communication, and resource sharing relationships with the Oregon Health Authority;
- Communications and alerting equipment and supplies including: handheld uhf radios, ham radios and base station with rooftop antenna, satellite telephones, email, internet, cellular phones, laptops, fax machines, and internet based technologies such as: broadcast fax, the Oregon Health Alert Network (secure alerting and collaboration tool), and the Oregon Hospital Capacity Website (system to monitor real time hospital situational awareness);
- Vaccine management and distribution resources;
- Small cache of medical supplies and medical personal protective equipment: gloves, gowns, N-95 respiratory masks;
- Small pool of passenger vehicles including passenger vehicles;
- Office space and meeting rooms;

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- Memorandum of agreement with large facilities for the setup of alternative care sites, a federal medical station, or mass dispensing/distribution locations;
- Medical sample processing and shipping facilities.

Peace Harbor Hospital

- Located in Florence, serves a population of approximately 25,000;
- Peace Harbor Hospital is a member of the Western Lane Emergency Operations Group;
- The hospital supports a helispot for Life Flight medical transportation to critical urgent care facilities in the Eugene area;
- Capacity: room for 50 critical patients and 50 ambulatory patients;
- The hospital is certified as a Level IV Trauma Center;
- The facility has five stationary generators;
- Hospital, hospital campus and off campus warehouse;
- Fuel storage includes 4,000 gallons of fuel always on hand with capacity up to 8,000 gallons if possible;
- Communications: satellite radio, HAM radio, short wave hand held radios (eight).

Additional County Capabilities:

Western Lane Emergency Operations Group is a collaborative effort between government entities and associated private citizen groups to identify, proactively plan for, mitigate the impact of, react to, and recover from natural or man-made disasters in Western Lane County. The primary goal is to respond appropriately, efficiently, and to effectively utilize all of the community's resources in all facets of disaster preparation training and emergency response to protect life and property.

City of Florence Department of Public Works – is located out of the tsunami inundation zone and has the resources and capabilities to repair roads and culverts. Public Works have assets including: backhoes, dozers, graders, plows, 4K tons of gravel – however have no stored fuels.

Oregon State Parks - Can provide space and staging areas. The parks also have stored fuels. The parks system has one 100,000 gallon water storage tank at Honeyman, however it is not seismically rated for a 9.0 earthquake and may not survive. There is a large landing area for aerial resources located at Woahink Lake east of Highway 101 off Canary Rd.

Lane County Public School District – Serves approximately 1,300 students in and around the Florence area. The Middle School is of newer construction and is built to higher earthquake standards and is expected to be usable and has been designated as a Red Cross Shelter. The Middle School can also support not only sheltering but can be sectioned off and portions can be used as a medical facility and has space to land a

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helicopter if needed. All of the schools located in the coastal areas of Lane County are out of the tsunami inundation area.

Aviation Assets

- **Florence Airport** - has a runway over three thousand feet long. The airport keeps fuels available for resident and visiting aircraft. Fuels: 6,000 gallons – Avgas; 4,000 gallons of Jet-A fuels. There are hand pumps available at the airport. The airport is out of the tsunami inundation zone and has staging capabilities;
- **ApexHeli Oregon, Inc.** is an active member of the Western Lane Emergency Operations Group, is a full service commercial, tour & training company offering both fixed wing and helicopter services and have stored fuel resources. Helicopters can handle 800 pounds – external load or 4 passengers;
- Local logging companies have some air resources – however no agreements have been set;
- Sea plane landings could occur on the many lakes in the area.

Sheltering Capabilities

- The Florence Event Center is out of the tsunami inundation zone and is capable of sheltering 300 – 400 people. The building has generator power available. Employees of the Center have attended shelter management classes in February, 2012;
- The Elks Club is large and could be used as a shelter – however no agreements have been set.
- ARC has staged two trailers in the Florence area. One is north of the Siuslaw Bridge and the other is south of the bridge. Each trailer has cots, blankets and some supplies (no food or water) to care for 100 people.

Catastrophic Event Operational Challenges:

- The Siuslaw River Bridge is likely to be heavily impacted by a major earthquake which will limit accessibility to medical and other essential facilities in Florence;
- City of Florence wastewater plant has two portable generators on trailers; 60 kw and 30 kw. However, the wastewater plant, generators, and equipment are in the tsunami inundation zone and are not expected to survive;
- Essential emergency response personnel will be impacted and agencies are expecting one half of their staff to be able to report for work;
- Critical infrastructure including: water, fuels, communication, power, roads and bridges are expected to be severely damaged;
- Transportation and lifeline routes in and out of the area to central Lane County will be heavily impacted;
- Mortuary capabilities will not be able to handle the number of fatalities generated by this event;

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- Limited urban search and rescue capabilities;
- Local government buildings have generators, however they are fueled with propane and would be a challenge to replenish post-event.

Medical

- Inability of staff to report to work due to infrastructure damage, injury, death, family concerns etc.;
- Due to the scale of the incident, the medical system will be immediately overwhelmed;
- Damaged or destroyed communications systems;
- Damaged medical facilities;
- Limited public health staffing surge resources and inability to sustain a prolonged response over multiple operational periods;
- Lane County Public Health has no active presence in coastal areas or outlying communities. Travel and transport may be difficult or impossible. Establishing situational awareness may be difficult.
- Inability to call upon mutual aid agreements since neighboring communities will also be impacted.

Peace Harbor Hospital

- Evacuation capacity compromised by the event;
- Security of staff, patients and facilities;
- Access to medical supplies;
- The demographics of patient population likely means there will be a proportional medical need that will be a challenge to meet;
- Concerns regarding emergency power. Existing fuel storage is at risk (underground) and the generator is also ground level;
- No dedicated water supply that is independent of the city supply. Concerns over disruption and/or contamination in this event;
- Staffing issues regarding the likelihood of bridges to the east and south being impassable. Many staff members live on either side of the bridges. Transportation of supplies and personnel will be heavily impacted;
- Hospital and medical facilities (clinics) will be immediately overwhelmed and may not be able to provide more advanced care due to conditions;
- Medical facilities may not be able to provide more advanced care due to conditions;
- Medications will be limited due to the inability of receiving regular shipments. Lack of access for commercial medical suppliers;
- Survivors with chronic conditions will require prescriptions quickly or they will add to the medical burden as their conditions deteriorate;
- The Peace Harbor Hospital is just outside of the current tsunami inundation area and is surrounded by a 42 foot berm. If tsunami inundation occurs and

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breaches the 42 foot berm around the hospital, water will be captured inside the berm with no outlet making the hospital inaccessible as well as trapping occupants inside;

- The Peace Harbor Hospital also has two Gate Keeper hospital shelters, however they are being stored at the Sacred Heart Hospital in River Bend (located in Springfield);
- Tourists - Depending on time of year – tourists will be stranded in isolated areas and unable to leave until transportation services can be restored. Most City and County food and water resources are not capable of providing for these additional populations.

Support Needed Immediately After a Catastrophic Event:

- Potable water and water purification systems;
- Safe and secure buildings for critical infrastructure, continuity of government and emergency management personnel in addition to safe and secure shelters;
- Hospital shelters, durable medical equipment and personnel, EMT's;
- Staffing: environmental health specialists, public health nurses, epidemiologists, incident management personnel will be needed to maintain response;
- Hospitals will require additional medical supplies and material including pharmaceuticals, antibiotics, vaccines, food, water, and temporary sheltering facilities;
- Assistance re-establishing communication systems;
- Portable generators;
- Fuel;
- Hand pumps for water and fuel;
- Urban Search and Rescue Teams, self-sustaining for a minimum of 72 hours, and equipment;
- Law enforcement / security for pharmacies and medical supplies, as well as existing food and water supplies and shelter facilities;
- Aerial support needed for evacuations of special medical needs survivors, injured and vulnerable populations. Relocation of patients needing serious care (dialysis and other resource intensive procedures);
- Temporary sheltering, food and water supplies. Due to aftershocks and safety concerns public buildings and schools may not be feasible to use immediately;
- Sanitation facilities needed in all populated areas;
- Engineers, supplies and essential heavy equipment for bridging, road repair and debris removal;
- Just-In-Time screening capabilities for professional medical volunteers;
- Mass Fatalities Incident teams and equipment.

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Identified Mitigation and Pre-Event Preparation:

- Areas with essential services and facilities in the tsunami inundation zone need assistance and financing to relocate these assets to City owned lands outside of the tsunami inundation zone;
- Increased coordination and/or agreements with the private sector to provide assistance post event;
- Funding to purchase shelters for schools including a three day minimum supply of water and food;
- Transfer of the designated 'Gate Keeper' hospital shelters from the Springfield area to Peace Harbor Hospital. Training on setting up alternative care sites;
- Funding to purchase and cache durable medical equipment and first aid supplies for hospital shelters;
- Funding for storage facilities for food, water and sheltering supplies;
- Funding for individual community supply caches and storage containers to possibly include bottled water, water filter straws, shelter canopies, blankets, tarps, rain ponchos, survival food bars, sanitation supplies, and medical supplies;
- Caches of pharmaceuticals needed including oxygen, insulin, Lasix, antibiotics, Coumadin, psychotropic drugs, and meds and supplies for burns;
 - Generally patients needing these medicines are faced with challenges from insurance companies to have a three month supply on hand in case of emergencies.
- Funding to purchase delivery systems for purified potable water;
- Additional portable generators that run on gasoline or diesel fuel;
- Continued neighborhood and community training with CERT and Map Your Neighborhood for public awareness and personal preparedness. Funding for training materials and equipment;
- Funding for storage container for CERT and Medical Reserve Corps equipment;
- Locate alternate areas to store emergency sheltering and other essential assets out of the tsunami inundation area;
- Coordination and/or agreements with the private sector assets and capabilities including: bridge engineering, safety and temporary rebuild and aerial support;
- Special needs and long term care facilities need protocols and procedures for patient evacuation, patient sheltering and care;
- Continued funding for retrofitting and possible relocation of essential facilities in all areas.

1.6 LINCOLN COUNTY OREGON

1.6 Lincoln County

Population: Approximately 45,000, actual population as a result of tourism could be twice that or more at all times of the year.

The county has an area of 980 square miles.

Incorporated Coastal Cities: Depoe Bay, Waldport, Siletz, Lincoln City, Newport, Toledo, Yachats

The executives of incorporated cities within Lincoln County are responsible for the direction and control of their community resources during emergencies.

Unincorporated Areas: Otis, Rose Lodge, Gleneden Beach, Lincoln Beach, Logsden, Little Albany, Harlan, Tidewater, Yaquina, Beverly Beach, Chitwood, Eddyville, Fisher, Burnt Woods, Agate Beach, Nashville, Neotsu, Nortons, Newport Heights, Kernville, Miroco, Otter Rock, Seal Rock.

Major Rivers: Alsea, Salmon, Siletz, Yachats, Yaquina



Local Response Support: Through existing emergency management planning, The American Red Cross, Sheriff's Posse, Lincoln County Search and Rescue Team, the Radio Amateur Civil Emergency Service, the Lincoln County Citizen Emergency Response Team (CERT), and private contractors are available to support and supplement local response and recovery operations.

First Responder Agencies/Entities: The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting Lincoln County:

Cascadia Subduction Zone Plan - County Response Information Annex

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Emergency Management Services

Lincoln County Office of Emergency Management

Law Enforcement Services

Lincoln County Sheriff's Department	Toledo Police Department	Newport Police Department
Lincoln City Police Department	Lincoln County District Attorney's Office	

Fire Services

Lincoln County Fire Defense Board	Linn/Benton Region 5 Hazardous Materials Response Team	
Chairman, County Fire Chief	Newport Volunteer Fire Department	
North Lincoln Fire & Rescue	Depoe Bay Fire District	
Seal Rock Fire District	Central Oregon Coast Fire District	
Yachats Fire	Toledo Fire	Siletz Fire

Ambulance Services

Pacific West Ambulance	South Lincoln Ambulance Association	Central Oregon Coast Fire and Rescue

Public Health and Hospital Services

Lincoln County Health and Human Services	Samaritan North Lincoln Hospital, 3043 NE 28th St. Lincoln City, OR 97367
Samaritan Pacific Communities Hospital, 930 SW Abbey St., Newport, OR 97365	

Emergency Communications Services

LINCOM 911	Lincoln City Police 911 Dispatch	Toledo Police 911 Dispatch

Identified Community Points of Distribution (C-POD) Locations

Yet to be identified by County emergency management

Identified Emergency Mobile Home Staging Locations

Yet to be identified by County emergency management

County Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Lincoln County Office of Emergency Management, County Departments, Cities, volunteer organizations, and the private sector;

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- All primary emergency response staff are trained and experienced in operating under NIMS and ICS;
- The County will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the State;
- Given shortages of time, space, equipment, supplies, and personnel during a catastrophic disaster, self-sufficiency will be necessary for an unknown amount of time that could range from several days to several weeks;
- The population of Lincoln County increases dramatically throughout the year reflecting an influx of tourists, seasonal residents, daily visitors, and recreation enthusiasts.
 - Local emergency planning efforts will focus on accommodating residents while preparing for changes in population trends throughout the year. However, significant increases to the local population may introduce challenges in meeting the needs of non-residents and other travelers during an emergency or disaster;
- Response communication, equipment and work centers may be destroyed or rendered inoperable during a disaster;
- Effective response will need public officials, first responders, employees, volunteers, and residents who are familiar with established policies and procedures, assigned pre-designated tasks, provided with evacuation and assembly instructions, and formally trained in their duties, roles, and responsibilities required during emergency operations.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

Lincoln County will be fractured into pockets of isolated communities due to loss of roadways, bridges and communication. Individual pockets of survivors will be on their own for a time period of much greater than 72 hours until communication and transportation between these pockets is reestablished. Many locations will be without emergency support until communication and transportation between these pockets is re-established;

Emergency services will be immediately overwhelmed with this scenario. All incident response will need to be prioritized due to limitations of staffing and equipment.

County Priorities:

Fire: (Responses for all fire districts were similar; information includes North Lincoln, Newport and Seal Rock Fire Districts)

North Lincoln Fire and Rescue is volunteer with a small paid administrative staff and approximately 70 volunteers covering 80 square miles. The fire district is spread over six locations- four smaller substations and two master stations. All NLFR facilities are

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located out of current tsunami inundation area. The district covers part of southern Tillamook County, and can provide limited assistance to that area.

Newport Fire has both career and volunteer firefighters and is tasked with protecting 15,000 people living in 25.8 square miles. Newport Fire has two stations, one located north and another south of the Yaquina Bay Bridge. Both stations are located out of tsunami inundation area, however main facility north of bridge is an old facility and likely will not survive. It's possible that fire equipment can be dug out of the rubble of the north station, but if not the district would lose majority of rolling stock including off road capabilities.

Seal Rock Rural Fire Protection District has approximately 16 personnel and two stations located outside of the tsunami inundation zone in Seal Rock and Bayshore. The district protects approximately 16 square miles and approximately 1400 people.

- Staff will react independently and report for duty once families are safe;
- Staff at all Districts are instructed to bring their families to surviving facilities;
- Inspect surviving fire department facilities for safety and usability;
- Stations will radio into main station command center to report availability and surviving equipment. Conduct windshield surveys where they can reach and begin response operations;
- Fires will only be fought to stop conflagration and to save life. County fire services are challenged dealing with one apartment complex fire on a good day, let alone with limited staffing and damaged equipment as likely under this scenario.

Depoe Bay Fire District protects 13 square miles of mostly unincorporated areas of Lincoln County including Siletz Keys, Salishan, Gleneden Beach, Lincoln Beach, Boiler Bay, Depoe Bay, Miroco, and Otter Rock. The permanent population is 8000, however there are multiple hotels including four multi-story commercial structures which house large tourist populations most months of the year, increasing the population as much as tenfold. Depoe Bay Fire District has three stations: Depoe Bay (Station 2300) at the District's center is in the tsunami zone and will likely not even survive the earthquake, Gleneden Beach (Station 2200) near the northern end of the District is just barely out of the tsunami zone – with new tsunami mapping, it may be in the newly defined inundation zone, and Otter Rock (Station 2400) at the far southern end of the District is on high ground, but has no staff there.

- Staff & volunteers will take care of their families first;
- Will have minimal firefighting capability due to lack of water and potential loss of equipment;
- Main goals will be accessibility to survivors and rescue.

Law Enforcement Priorities:

- Conduct situational status assessment of department resources ;
- Secure critical facilities (fuel);

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- Team up with and assist fire departments to serve as a response strike force and to provide security for fire response operations.

City of Lincoln City

- Safety of facilities and personnel;
- Safety and provision of assistance to City population;
- Assessment of infrastructure and restoration of public works;
- Approx. 72 hours' worth of fuel for operations (vehicles and generators).

Lincoln County Public Health

- Ensure safety of facilities and staff;
- Contact surviving and available health resources in County;
- Coordination with County Emergency Management and responders to be able to maximize limited resources to help.

Lincoln County Emergency Management

- Ensure safety of staff and facilities;
- Contact County-wide AOCs to get situational awareness and needs;
- Coordinate response with multiple impacted sites and limited resources;
- Contact State ECC to request additional assistance.

Lincoln County Schools

- Ensure safety of students, facilities and staff;
- Evacuate schools into temporary shelters for safety of students;
- Coordinate available supply caches for school use;
- Coordinate with Red Cross and County Emergency Management for additional use of surviving school buildings.

Available Assets:

Fire:

- North Lincoln Fire and Rescue has a water search and rescue team, equipped with three personal watercraft, small kayaks, etc. and a 10-15 man team equipped for surface water rescue. Watercraft could be used to establish communication with isolated pockets of survivors;
- County has civil engineers employed with the City of Newport and Lincoln City as well as the County engineer. To supplement structural engineering and safety assessments, senior building officials and local contractors may be able to be utilized;
- Many smaller watercraft (personal boats) of the public could possibly be utilized to supplement response and provide assistance;

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- County responders would be able to make temporary crossings over smaller water bodies by dropping culvert and dropping rock;
- ATV resources for both fire and police;
- Seal Rock has a CERT team consisting of 15-20 volunteers;
- Seal Rock has ODOT facility in district-Seal Rock Fire is working to place fuel container (approx. 500 people) at ODOT facility for use by fire district;
- Seal Rock Has two shelters (tents) capable of holding 200 people, **to be purchased 2012-2013.*

Health

- Health Department has four satellite phones in the county;
- Two water purification units capable of 750 and 400 gal/hour not for public usage, for first responders and clean water for health care;
- Two hospitals and numerous clinics in Newport and Lincoln City;
- Supply cache at Samaritan Pacific Communities Hospital (Newport) capable of providing minimum of 100 patients of varied care needs. Supply Cache have organized “to go” equipment in place to set up a medical facility outside of the hospital grounds;
- County Public Health has a mobile clinic (trailer) with basic medical supplies in Newport;
- Mobile water purification units at each of Lincoln County’s eight fire districts have a 120 gal/hr water purifier, Lincoln County has one, hospitals in Lincoln City and Newport each have one, and Lincoln County Public Health has two. Priority usage of these water purifiers is to keep response and medical assistance functioning;
- City of Toledo has mobile water purification unit for entire city. Housed at public works and have trained public works staff running it;
- Four (north, south, east and central county) caches of EMS supplies cached in County containing: PPE equipment, basic trauma and first aid supplies, oxygen.

Schools

- Schools - 6000 students to be sheltered based on scenario occurring during school hours;
- If school is not in session, these supplies would be made available for the general population;
- If school is in session there is not enough supplies to assist outside of the schools;
- Main shelter schools have cache of supplies;
- Teen CERT has cache of equipment in schools;
- CERT group in Lincoln City high school can provide help to the high school;

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- Agreement w/ Red Cross to use schools as shelters only if the schools are not being used to shelter students, however dual sheltering is a possibility in this scenario;
- Most school buses are not located on school property. In Lincoln City they are located in the inundation zone;
- Newport school buses are stored in Toledo next to fire department. Could be used for communications, shelter and fuel supply;
- Waldport buses are also on high ground at the school and can be used for shelter, fuel, and communications;
- Waldport – Crestview Heights School has a Satellite Phone;
- Newport Intermediate School has a Ham Radio.

Law Enforcement

- Newport Police volunteers (approx. 27) could augment response and support;
- ATV resources for both fire and police;
- City of Newport has two jet boats for law enforcement located near Newport middle school;
- OSP has two zodiac boats in Lincoln County;

Additional County Capabilities:

- Fire support for landings at Newport airport;
- The City of Waldport has supply caches on high ground-supplies and water, food for five days in several locations around the city;
- Public Health has the ability and resources to provide assistance in making alternate sheltering arrangements for those with behavioral health issues and other issues that may present stress on the general shelter population;
- Mobile communication trailers located in County, including satellite phones at the hospitals and with the Siletz tribe.

Catastrophic Event Operational Challenges:

- Much larger population with tourists, estimated that population is 50% greater than listed due to tourist population;
- Tourists are primarily visitors from other locations in Oregon and the Northwest USA. Due to impacts in their own jurisdictions, it could be a challenge returning them to their homes;
- With harbor damages the only viable method of support by sea is by air or with unimproved beach landings;
- Water system for fire suppression will likely not survive, draft sites where they can pump is unlikely to be accessible due to mud;

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- Working off generators, will need power generation to maintain mobile radio charge. Communication centers and EOCs using amateur radio to communicate amongst County, generators will last approximately 72 hours;
- County has no USAR ability other than water rescue and light SAR training by CERT and fire departments;
- Estimated that 50% of emergency responders available due to policy of responders capable of bringing family to a safe location at the stations. With described scenario (0900 on a work day), response could be delayed as responders check on safety of families;
- Newport Fire has two stations located north and south of the Yaquina Bay Bridge. Both stations are located out of tsunami inundation area, however main facility north of bridge is an old facility and likely will not survive. It's possible that fire equipment can be dug out of the rubble of the station, but if not the district would lose majority of rolling stock including off road capabilities. Stations loss would also impact support facilities for staff and family;
- Areas to the east in Newport along Highway 18 may not be accessible; likely that access to Toledo will be cut off;
- Danger in ferrying people and resources across waterways impacted by tsunami and debris;
- Depoe Bay Fire District will be geographically cut off from all other areas of the County. It will not be able to receive support from either Lincoln City from the north or Newport from the south;
- Siletz Bay Airport will be destroyed;
- Depoe Bay's harbor will be severely impacted;
- Depoe Bay Fire District's only medical facility (Depoe Bay Samaritan Clinic) will be destroyed in the tsunami;
- Depoe Bay Fire District's survivors will likely congregate on high ground areas in the adjacent forest with limited shelter and provisions available;
- Many public safety personnel live outside community they serve;
- Waldport Fire is in inundation zone and their facilities, rolling stock and boats will be lost. City Hall in Waldport will also likely be destroyed;
- Likely access to harbor in Newport to be blocked by debris from tsunami and bridge debris;
- Yachats- fire station in tsunami inundation zone, likely loss of all equipment;
- Due to topography, Waldport has limited space available for tsunami evacuation assembly areas. Evacuees likely to be in improvised areas along hillside;
- Toledo likely to lose earthen dam for winter water supply as a result of shaking;
- Limited ability of those needing medical care to get to medical facilities in county, no ability to move those needing severe care (burn victims, dialysis, etc.);

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- Lack of clean water will limit the ability to medically treat survivors;
- Medical facilities may not be able to provide more advanced care due to conditions;
- No unified coordination among health care sector in County;
- Limited knowledge of citizens' medical issues, limited data available;
- Spread of disease amongst survivors;
- Lack of access for commercial medical suppliers;
- Concern over fire safety and tent shelters;
- Challenge in providing for responding law enforcement officers over the long haul, County fire services indicated they could support police food and shelter needs if needed;
- Spontaneous volunteer management and safety;
- Extremely limited police personnel available (City of Newport indicated likely having five to six officers per shift, other Cities would experience a similar low percentage available).

Support Needed Immediately After a Catastrophic Event:

- Need replacement trained and equipped response personnel from outside the area(s) beyond 72 hours;
- Immediate aerial or sea re-supply of external resources for life sustainment. Food, water and shelter needs will be much greater than Lincoln County can provide for due to tourist influx;
- Aerial or sea evacuation of injured, vulnerable populations and tourists;
- Water purification equipment needed in all populated areas to provide potable water to survivors;
- Fuel – diesel, gasoline, propane;
- Communication system power, support and repeaters to maintain response;
- Sanitation needs;
- Supplies (culvert, rock) and equipment needed for road repair and temporary bridge construction;
- Seal Rock Fire District will need small boats, they have PWC, but those are ill equipped for rescue and transport;
- Supplies and support for residents to shelter in place;
- Additional fire/rescue equipment and replacement parts;
- Need support and temporary shelter (tents, larger gathering tents for many people) for survivors. Due to aftershocks and safety concerns, school facilities not feasible to re-shelter immediately;
- Schools' top needs are water, shelter, food, and additional medical supplies;

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- Durable medical goods and pharmaceuticals for chronic illnesses;
- Need additional supply caches for medical goods and pharmaceuticals;
- Assistance and transportation relocation of patients needing serious care (dialysis and other resource intensive procedures);
- Medicines for psychological and behavioral health needs;
- Psychological first aid training for responders and shelter staff;
- Security staff for shelters and increased security presence at critical facilities (infrastructure, fire stations, pharmacies and surviving food locations);
- Ability to screen volunteers and shelter populations to provide security for shelters;
- Immediate access to communication and information to allow survivors to communicate with family members outside of the area and provide reunification services;
- Mass fatality personnel support and equipment.

Identified Mitigation and Pre-Event Preparation Needs:

- Volunteer management protocols for locals;
- Donations management protocols for locals;
- Coordination with quarry and construction companies for roadway reconstruction, equipment and other post-event needs;
- Agreement with law enforcement agencies in Lincoln County to have officers report to the nearest law enforcement jurisdiction to join their ranks if they are unable to report at their own jurisdiction;
- Look at alternate locations for school bus storage so they could be used for evacuation support, fuel, communications and perhaps sheltering;
- State assistance and support of counties for continued COOP planning and resources;
- Local officials be trained in NIMS and ICS and response procedures;
- Agreement on standards for alternate catastrophic medical response protocols to deal with scenario;
- Pre-planning of impact on vulnerable populations and what they will need in Lincoln County post-event;
- Preparedness planning for drug and alcohol centers to have more of their prescription needs;
- Planning on what chronic care needs will be needed based on population in the County;
- Funding for individual community supply caches, similar to that described on the next page, to include shipping container or similar large survivable storage device;

1.6 Oregon Coastal Counties – Lincoln County

Seagrove Community 250 Person Disaster Supply Cache				
	Quantity	Price	Total Price	Comments
<u>WATER:</u>				
Bottled Water	250	\$ 0.20	\$ 50.00	
Water Filter Straws	250	\$ 6.00	\$ 1,500.00	Filter 20 gallons/water per straw
55-gallon Water Barrels	8	\$ 80.00	\$ 640.00	1/2 gallon water per person for 2 days
<u>SHELTER:</u>				
10 x 20 Steel Frame Canopy	10	\$ 199.00	\$ 1,990.00	Sleeping Quarters (Costco)
32 x 16 Steel Frame Canopy	2	\$ 479.00	\$ 958.00	1 Medical Treatment Area, 1 Gathering/Eating Area (amazon.com, amazon.com)
Mylar Blankets	250	\$ 1.00	\$ 250.00	
Rain Ponchos	250	\$ 0.50	\$ 125.00	Baker Store
Tarps	20	\$ 10.00	\$ 200.00	Floor for Canopies (Costco)
<u>MEDICAL:</u> 500 Person Trauma Medical Kit				
	1	\$ 1,050.00	\$ 1,050.00	EQ Management (100 person kit is \$400)
<u>FOOD:</u> Survival Food Bars	1000	\$ 3.50	\$ 3,500.00	3600 calorie food bars, perforated (EQ Management)
<u>SANITATION:</u> Toilet Kits	12	\$ 20.00	\$ 240.00	5 gallon bucket w/liner, seat, lid, toilet paper, hand sanitizer, & disinfectant
<u>SEARCH & RESCUE KIT</u>	1	\$ 500.00	\$ 500.00	4 person professional rescue kit (EQ Management)
<u>CONTAINER:</u> 120 foot steel storage container	1	\$ 3,795.00	\$ 3,795.00	Weather proof, tamper proof (Alec Containers)
TOTAL			\$ 14,798.00	
<u>ASSUMPTIONS:</u>				
Hypothermia is a significant threat.				
Hundreds of aftershocks will discourage people from staying in homes that aren't destroyed in the initial earthquake (psychological barriers, structural barriers)				
Water and Shelter are the highest survival needs.				
Supplies (food, shovels, clothing, etc) will be able to be collected from homes that aren't destroyed.				
<u>Other Needs:</u>				
Pet Supplies (leashes, food, carriers)				
Rope/Stakes/hammer				
Lanterns/Flashlights				
Stocking caps/gloves				

- County and State need knowledge of nightly occupancy of hotels in order to plan more effectively for needs of tourists;
- Policies and procedures for identifying and credentialing useful volunteers that are spontaneous and not affiliated with county emergency response volunteer groups;
- Contact and coordination with local contractors to possible aid in road reconstruction, building safety assessment and other post-event needs;
- Volunteer programs (Citizen Corps) need continued funding, increased training of volunteers and increased footprint to prepare community and increase readiness for such an event;
- Assessment of alternate forest service roads to reach eastern parts of County;
- Upgrade generators of emergency response agencies in County;
- Promote use of and assistance in provision of personal family supplies;
- Continued discussion and emergency management coordination and planning with locals, State and Federal agencies;
- Need continued funding for retrofitting of critical facilities;
- Increased prioritization and guidance from federal government and State for personal preparedness for greater than 72 hours;

1.6 Oregon Coastal Counties – Lincoln County

- Coordination and support from the State to deal with mass fatalities using catastrophic planning protocols created to deal with issues as a result of this event.

1.7 TILLAMOOK COUNTY OREGON

1.7 Tillamook County

Population: The Tillamook County population is approximately 25,845 persons. As a result of tourism, the population can increase dramatically during spring and summer months.

Incorporated Coastal Cities:

Bay City, Garibaldi, Manzanita, Nehalem, Rockaway Beach, Tillamook, Wheeler

The executives of incorporated cities within Tillamook County are responsible for the direction and control of their community resources during emergencies.

Major Rivers:

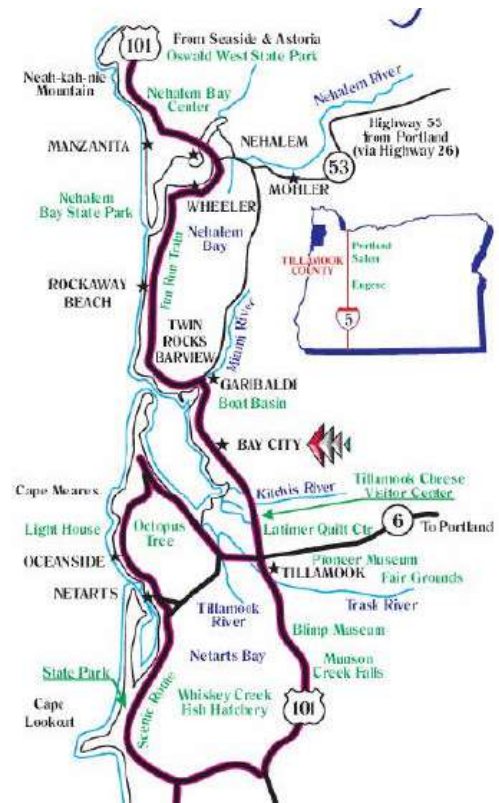
Trask, Kilchis, Miami, Wilson, Tillamook, Nehalem

Local Response Support:

The Tillamook County Sheriff's Department coordinates Emergency Management, search and rescue, marine and forest deputies, criminal probation and parole and the county jail. The County Sheriff also provides contracted law enforcement to the incorporated City of Garibaldi, as well as unincorporated communities in the county.

First Responder Agencies / Entities:

The following agencies and entities maintain primary roles and responsibilities during an emergency situation impacting the coastal areas of Tillamook County.



Cascadia Subduction Zone Plan - County Response Information Annex

1.7 Oregon Coastal Counties – Tillamook County

Emergency Management Services	
Tillamook County Emergency Management	City of Manzanita Emergency Management
City of Rockaway Beach Emergency Management	

Law Enforcement Services	
Tillamook County Sheriff's Department	Tillamook County Sheriff's Department for: City of Garibaldi
Manzanita Police Department (Also serves City of Wheeler)	City of Tillamook Police Department
City of Rockaway Beach	

Fire Services			
Bay City Volunteer Fire Department	Garibaldi Rural Fire Protection District	Nehalem Bay Fire and Rescue District	Nestucca Rural Fire District
Netarts / Ocean Side Fire District	Rockaway Beach Volunteer Fire Department	Tillamook Fire District	

Ambulance Services
Tillamook County General Hospital Ambulance Service

Hospital and Medical Services		
Tillamook County General Hospital	Adventist Clinics	Bayshore Clinic (Pacific City)
Rinehart Clinic (Wheeler)	Tillamook County Health Clinics	

Emergency Communication Services	
Tillamook County Emergency Communications District - Provides 9-1-1 Communications for the following emergency response agencies:	
Manzanita Department of Public Safety	Oregon State Police – Sub Station
Rockaway Beach Police Department	Tillamook County Sheriff
Tillamook Police Department	Bay City Volunteer Fire Department
Garibaldi Rural Fire Protection District	Nehalem Bay Fire and Rescue District
Nestucca Rural Fire District	Netarts / Oceanside Fire District
Rockaway Beach Volunteer Fire Department	Tillamook Fire District
Tillamook County General Hospital Ambulance	

Identified Community Points of Distribution Locations
Yet to be determined by County Emergency Management
Identified Emergency Mobile Home Staging Locations
Yet to be determined by County Emergency Management

1.7 Oregon Coastal Counties – Tillamook County

County Response Assumptions:

- An emergency of this magnitude will require prompt and effective response and recovery operations by Tillamook County Office of Emergency Management, County Departments, Cities, volunteer organizations and the private sector;
- All primary emergency response staffs are trained and experienced in operating under NIMS and ICS;
- The County will be responsible for utilizing all available local resources along with initiating mutual aid and cooperative assistance agreements before requesting assistance from the State;
- Due to post-event logistics challenges, personal self-sufficiency for the population may be necessary for an unknown amount of time that could range from several days to several weeks;
- The population of Tillamook County increases during peak tourist season reflecting an influx of tourists, seasonal residents, daily visitors and recreation enthusiasts;
- Available County and City emergency responders are not enough to sustain operations for long periods due to major damage and destruction.
- Available stored fuels are not sufficient to sustain emergency response operations for more than 48 hours.

The response capability of Tillamook County is unable to provide and/or sustain this type of operation especially during tourist season when populations can double.

Catastrophic Event Assumptions:

See Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan pages 4-1 to 4-11 for statewide Cascadia Subduction Zone earthquake and tsunami assumptions.

Many of the coastal communities in Tillamook County will be fractured into pockets of isolated communities and neighborhoods due to loss of roadways, bridges, communication, and tsunami flooding. Individual pockets of survivors will be on their own for a time period of much greater than 72 hours until communications and transportation between these pockets is reestablished. Additionally, these locations will be without emergency support of fire, law enforcement, and ambulance service until communication and transportation between these pockets is reestablished;

Coastal communities at low elevations will likely suffer severe damage due to the earthquake and resulting tsunami. Damaged infrastructure will inhibit any movement in and out of impacted areas. Emergency Services will be immediately overwhelmed with this event. All incident response will need to be prioritized due to limitations of staffing, equipment, excessive damage and inaccessibility to impacted areas.

1.7 Oregon Coastal Counties – Tillamook County

County Priorities:

Tillamook County Sheriff's Office

Emergency Management

- Ensure safety of facilities and staff;
- Preservation of life and safety;
- Obtaining manpower and equipment to support increased and prolonged first responder issues that will follow;
- Contact county wide AOC's to assess situation and determine needs;
- Coordinate response with multiple impacted sites and limited resources;
- Contact State ECC to request additional assistance.

Tillamook County Public Health

- Assure safety and usability of County Health Department, staff and assets;
- Establish contact with County Hospital and local clinics to determine serviceability and needs;
- Coordinate with County Emergency Management to be able to maximize limited resources to address needs.

Tillamook County Cities –Cities in the County are striving to have as many facilities functional after the event to take care of the response and recovery process, including looking where possible to stage all critical equipment out of the affected area and in strategic locations throughout. Normally these locations will be the evacuation areas to help assist citizens displaced from their homes. In this event there will be a very limited time frame for evacuation which may greatly limit abilities to give aid to displaced citizens.

Due to geographic factors many County Cities are currently not well equipped to handle catastrophic incidents where a large part of the area will be devastated due to tsunami and/or earthquake or similar events. There is a high probability that critical facilities and water and wastewater facilities will be lost or severely damaged. With the probability of areas of the County cut off from other areas due to landslides, bridge collapses, and flooding, this could hamper a long term restoration effort and search and rescue operations.

With surviving resources and capabilities Tillamook County Cities' priorities are:

- Safety of emergency response personnel, facilities and assets: fire, police, public works, enact continuity of government protocols;
- Public safety and security;
- Establish lifesaving and survivor search and rescue operations;
- Assessment of emergency support assets;
- Assessment of essential facilities-police, fire stations, local government offices, for safety and security;

1.7 Oregon Coastal Counties – Tillamook County

- Establish command and control system with an EOC and communications;
- Safety assessment of pre-designated sheltering facilities;
- Public works to assess damage to critical utility services;
- Provide continual assessments of the situation as it changes.

Available Assets:

Fire

Tillamook Fire District provides fire service for Tillamook, Kilchis, Idaville, Cape Meares, Trask, Wilson, Fairview, South Prairie, Bewley Creek, and Pleasant Valley. The District maintains three fire stations with three full time staff and 40 volunteers:

- Tillamook;
- Pleasant Valley;
- Cape Meares.

Bay City Fire Department provides fire service with one fire station and 18 volunteer staff.

City of Garibaldi Fire – provides fire service with one fire station and 18 paid per call firefighters. The City has received a FEMA grant for the seismic rehabilitation of their fire station.

City of Manzanita Fire Department provides fire service with one fire station, two full time firefighters and 18 volunteer fire fighters.

City of Nehalem Bay Fire & Rescue Department provides fire and rescue service with one fire station and 20 volunteer firefighters.

Rockaway Beach Volunteer Fire Department provides fire protection with one station, 15 paid per call firefighters and 15 volunteer firefighters.

City of Wheeler fire services are provided by Nehalem Bay Fire & Rescue.

Emergency services for Tillamook County fire agencies include:

- Fire Suppression;
- Fire Prevention;
- Emergency Medical Services;
- Wildland and light urban search and rescue;
- Mutual aid to surrounding communities if possible due to staffing concerns;

Law Enforcement

Tillamook County Sheriff

- Tillamook County Emergency Management operates under the Sheriff's Office.
- The department has volunteer marine and wildland search and rescue teams.
- Maintains criminal, probation, parole and county jail divisions.

1.7 Oregon Coastal Counties – Tillamook County

- Has at its disposal a communication trailer and a converted ambulance used for communication support.
- County offices / jail are supported with a large diesel generator that supports 40% of the building in the event of an outage.
- Generator for facilities with 48 – 96 hours of fuel.
- Maintains an MOU with Sheldon Oil (a main supplier of fuel within the County) to supply additional fuel during an emergency, assuming they could get there and the storage containers were not damaged.
 - Sheldon Oil has numerous gas stations throughout the County.
 - Sheldon Oil has installed generators at three of their gas stations (one north, one central and one south) in the coastal County area;

Bay City - Law enforcement is contracted through the Tillamook County Sheriff's Department and serves a population of approximately 1,286.

Garibaldi – Law enforcement is contracted through the Tillamook County Sheriff's Department and serves a population of approximately 895.

Manzanita Police Department - employs three sworn officers and a Police Chief. The department serves a population of approximately 564.

Nehalem – Law enforcement is contracted through the Tillamook County Sheriff's Department as well as the Manzanita Police Department. The law enforcement contracts serve a population of approximately 200.

Rockaway Beach – Law enforcement is provided by five officers and serves a population of approximately 1,276.

Tillamook – Law enforcement is provided by the City Police Department. The Department employs 13 officers and serves a population of approximately 11,000 including the unincorporated communities of Kilchis, Idaville, Cape Meares, Trask, Wilson, Fairview, South Prairie, Bewley Creek and Pleasant Valley.

City of Wheeler contracts with the Sheriff's Department and Manzanita Police Department to provide law enforcement services for approximately 391 residents.

Tillamook County Health Department

- Public Health Department; Public and Environmental Health Programs / Health Officer and two Program Managers;
- Staff includes: one physician, four public health registered nurses, two environmental health specialists and office support specialists;
- Three Primary care clinics with staffing of: primary care staff including medical director, two physicians, one adult nurse practitioner, one pediatric nurse practitioner, two physicians assistants, one clinic nurse manager, two registered nurses, three medical assistants, one clinic manager, seven medical records / clerical support staff;

1.7 Oregon Coastal Counties – Tillamook County

- Primary care clinics have basic medical supplies, including limited chronic care medications and antibiotics;
- Two of the clinics have generator power sources to run the entire clinic;
- All three clinics have radio communication abilities including base and hand held radios;
- Two mobile HAM radios;
- Tillamook County Public Health supports the Tillamook County Medical Reserve Corps;
- Two satellite phones for staff to use to maintain communications in emergencies;
- Nehalem Bay has Medical Reserve Corps volunteers, but is included as a medical asset under Tillamook County.

Additional County Capabilities:

The Port of Tillamook Bay facility is located on a former WWII Naval Air Station encompassing 1600 acres of mixed area including forest land, wetland, airport, and mainly industrial use. A large lumber mill is also on Port lands including small shops and trucking facilities.

Assets and capabilities include:

- 5,000 foot runway at the airport and a cross runway;
- Available landing area for helicopters;
- The airport runways have a large capacity for air freight weight;
- Fuels – Jet-A and 100 low lead availability;
- Septage Receiving Station for municipal waste;
- Small fleet of pickup trucks;
- Large equipment: front end loader, excavator, CAT, skid-steers, large railroad cranes and trained personnel to run them;
- Large paved areas for large trailers, storage, etc.;
- A few buildings have kitchen areas.
- Storage area available for cots and medical supplies;
- Personnel trained in water and wastewater management;
- Located six miles from Tillamook Bay at an elevation of 36', with higher elevations further into the Industrial Park's 1600 acres.

Nehalem Department of Public Works:

- Can provide water treatment and distribution through city infrastructure;
- Currently installing a new water line parallel to Hwy. 101 – nearing completion;
- Street maintenance – and appropriate equipment;
- Waste water treatment facilities;
- Engineering management.

1.7 Oregon Coastal Counties – Tillamook County

Tillamook County Department of Public Works:

- Agreements with Portland Metropolitan Area Transportation Cooperative (PMAT) and ODOT;
- 18 emergency contracts with excavation contractors;
- Three on-call contracts with engineering firms;
- Fuel storage tanks;
- Generators at the north, central and south County shops;
- Sand bags;
- Tarps;
- Heavy equipment: excavators, backhoes, dozer, graders, dump trucks, crane and vacuor vacuum truck, as well as trained personnel with experience.

Catastrophic Event Operational Challenges:

- Mobilization of essential emergency response personnel will be limited due to damaged roadways and bridges and inaccessibility to offices and equipment as well as family commitments and safety issues;
- Communications capabilities will be severely impacted;
- Maintaining generator power to critical facilities due to lack of fuel;
- County and City resources have very limited urban search and rescue capabilities;
- County and City resources have very limited potable water storage and/or water purification capabilities;
- Available stored fuels may be damaged and become unusable;
- A large part of Tillamook County's economy is in dairy products. Animal populations will present unique issues from the need of electricity for milking, and animal mortality and disposal needs.

Port of Tillamook

- The Port is located south of the City of Tillamook; getting to the Port if roads are blocked would be an issue for its use as a personnel and material staging location;
- The port supports a railroad that starts at the Industrial park and continues parallel to Hwy. 101 up through the Wheeler area. The rail line was damaged in the storms of 2007 and cannot support freight weight, however there is a tourist train in current operation. If no major damage occurs to the rail it can be used to transport people from south of Tillamook up through the County.
- There are many older (1940's) buildings that are not seismically upgraded. The large blimp hangar is in danger of collapse with such an event.

1.7 Oregon Coastal Counties – Tillamook County

Tillamook County Public Works:

- Limited staffing;
- Bridge conditions;
- Crew support;
- Failing / poor condition of road system;
- Communications both internal and external;
- Slide prone areas on major lifeline roadways which would impact lifeline routes / evacuation routes;
- Many of the communities along the coast will be isolated due to damaged roadways and bridges.

Health Department & Hospitals

- Medical assets will be immediately overwhelmed due to the loss of the Tillamook Hospital, located in the tsunami inundation zone. Surviving medical clinics will be insufficient to handle the injured;
- Tillamook Hospital Helispot is in the tsunami inundation zone;
- Structural damage or demolition of clinic facilities and supplies / equipment;
- Damage to vehicles or roads limiting ability of staff to respond;
- Actual involvement of staff and families, injury and/death; or their homes in destruction caused by tsunami/earthquake;
- No stored supply of potable water or sterile water which will limit the ability to treat survivors;
- Medications will be limited due to the inability of receiving regular shipments. Lack of access for commercial medical suppliers;
- Mortuary capabilities are limited.

Support Needed Immediately After a Catastrophic Event:

- Immediate assessments of County assets and accounting for staff availability and safety;
- Building safety assessments;
- Urban search and rescue support and personnel;
- Fuel for critical facility generators and responders;
- Safe and secure buildings/shelters for critical infrastructure and responding personnel;
- Need replacement trained and equipped emergency response personnel from outside of the area(s);
- Mass Fatalities incident teams and equipment;
- Immediate aerial and/or sea support needed to re-supply communities with water, medical supplies, food, shelter, and response personnel;
- Re-establishment of transportation lifeline routes for evacuations, support personnel and equipment;
- Inspections and determinations of use restrictions for surviving bridges;

1.7 Oregon Coastal Counties – Tillamook County

- Support needed for evacuations of special medical needs survivors, injured and vulnerable populations. Relocation of patients needing serious care (dialysis and other resource intensive procedures) to facilities outside of the impacted areas;
- Aerial resources for assessments, evacuations, and supplies;
- Additional temporary sheltering, food and water supplies for displaced survivors and tourists; due to aftershocks and safety concerns public buildings and schools may not be feasible to use immediately;
- Water purification equipment in all populated areas to provide potable water to survivors;
- Water purification equipment needed in surviving medical facilities;
- Sanitation facilities need in all populated areas;
- Supplies and equipment for bridging, road repair and debris removal;
- Durable medical supplies and equipment for temporary hospital facilities;
- Supplies of pharmaceuticals for chronic medical conditions, including psychological and behavioral health needs;
- Establishment of community points of distribution throughout the County, and within walkable distance for survivors;
- Communications support.

Identified Mitigation and Pre-Event Preparation:

- Cities with essential services and facilities in the tsunami inundation zone need assistance and financing to relocate these assets to City owned lands outside of the tsunami inundation zone;
- Increased coordination and/or agreements with the private sector to provide assistance post event;
- Funding to purchase water purification systems and water stores for critical facilities, hospitals and clinical medical facilities;
- Medical services needs water purification abilities and stored potable and sterile water;
- Funding to purchase water purification systems and water stores for hospitals and clinical medical facilities;
- Funding for storage facilities for food, water and sheltering supplies;
- Funding for individual community supply caches and storage containers to possibly include bottled water, water filter straws, shelter canopies, blankets, tarps, rain ponchos, survival food bars, sanitation supplies, and medical supplies;
- Special needs and long term care facilities need protocols and procedures for patient evacuation, patient sheltering and care;
- Continued funding for retrofitting and possible relocation of essential facilities in all areas;

1.7 Oregon Coastal Counties – Tillamook County

- Agreements with the private sector to supplement and address: bridge engineering, safety assessment and temporary rebuilding of roadways. Private sector coordination with aerial support companies needed also;
- Critical need of generator power and fuels. Most generators are not expected to survive event;
- Surge capacities of local hospitals cannot handle the medical needs after this event. Pre-event purchase and storage of critical/essential equipment is needed;
- There is a need for interoperable communications capability and equipment for County hospitals;
- Funding for retrofitting local water infrastructure. Community water tanks and pipe network are not expected to survive earthquake;
- Retrofitting of clinics and ambulatory medical surgery centers;
- Increased communication abilities for Rural Fire Protection Districts and rural communities, especially in communities that are expected to be isolated in this event;
- Better communication abilities to provide medical services communication interoperability with County communications;
- Medical community needs plans for the evacuation and care of at least four thousand severely disabled/and non-ambulatory residents. These plans and protocols need to extend to in-home caregivers, foster homes, and long term care facilities;
- Caches of pharmaceuticals needed including oxygen, insulin, Lasix, antibiotics, Coumadin, psychotropic drugs, meds and supplies for burns;
- Generally patients needing these medicines are faced with challenges from insurance companies to have a three month supply on hand in case of emergencies.
- Agreements with private security companies to provide security for pharmacies surviving the event to safeguard existing pharmaceuticals.

1.7 Oregon Coastal Counties – Tillamook County

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Metropolitan Oregon Counties

CSZ Area 2, Metropolitan Oregon Counties



In the **Oregon Metropolitan Counties of Washington, Multnomah and Clackamas (and to a lesser extent the cities of Eugene (Lane County) and Salem (Marion County))**, effects related to the earthquake include: Power supplies will fail and be unavailable for a month or more except by generator. The general

situation for roads will pertain to bridges that will be unavailable due to collapse or separation from approach abutments. Many will only allow limited traffic. Neighborhoods in urban centers will be initially isolated by road damage and debris. Railroad facilities including bridges will be damaged in multiple locations. Pipeline delivery of fuels will cease due to damage of compressors or pumps until they can be tested. They may run at less than full capacity for months or years. Many masonry structures will sustain significant damage including historical buildings. Areas with older, masonry apartment stock will require significant shelter capacity to be opened nearby. Much housing stock will survive with varying damage but loss of sanitary sewer, the need for gas, electrical and plumbing inspection will prevent prompt re-occupying of existing housing stock. Some hospitals / health facilities will sustain serious damage, though loss of water and power may be more significant factors initially. PDX International and The Port of Portland will be closed for weeks and possibly months. Partial reopening of the airport and port and their access to nearby warehousing and fuel storage will be critical. Older firehouses and police stations as well as logistical support centers for trains, busses, and public safety will sustain damage requiring relocation of those operations.

2. Metropolitan Oregon Counties

Oregon Metropolitan Counties shortfall expectations are:

- Priority reconnection to main line for air and marine ports and petroleum terminals as well as hospitals and water utilities;
- Electrical power will fail;
- Communications methods will largely fail. Surviving communication systems will degrade as generators run out of fuel;
- Normal response centers at police and fire stations will be disrupted in some areas;
- Road clearing and debris management may have to be apportioned on an area or regional basis;
- Communities may be isolated and require either re-supply of food and medicines or relocation of some residents;
- Large-scale shelter areas will have to be erected on short notice in larger urban areas;
- Multiple urban search and rescue teams will be required in each of the cities of Portland and its suburbs, Salem and Eugene; and to a lesser degree in smaller Cities throughout Western Oregon);
- This area will be a significant center of the health services response and recovery activity to the impacted area overall and will require a variety of support systems to enable leveraging the world-class facilities located here;
- Pharmaceuticals supply will be reduced;
- Augmentation of personnel will be required for all elements of response: fire, police, security, emergency management, utility maintenance, shelter staffing, etc.;
- Immediate / initial response in first 96 hours will be from local residents and resources;
- Limited operational state of radio transmission / overloaded with high volumes of emergency responder traffic;
- Fuel and food deliveries will be required within one week. Diesel and gasoline are priority fuel deliveries for generators and responders and propane for some generators and heating. Utility restoration support will be a priority in these areas;
- Support for voluntary self-evacuation by providing transport to relocation assistance;
- Control of vehicle access to surviving freeways and state highways will be required to minimize non-emergency traffic.

2.1 CLACKAMAS COUNTY OREGON

2.1 Clackamas County

TO BE DEVELOPED

2.1 Metropolitan Oregon Counties-Clackamas County

TO BE DEVELOPED

2.2 LANE COUNTY OREGON

2.2 Lane County

TO BE DEVELOPED

2.2 Metropolitan Oregon Counties-Lane County

TO BE DEVELOPED

2.3 MARION COUNTY OREGON

2.3 Marion County

TO BE DEVELOPED

2.3 Metropolitan Oregon Counties-Marion County

TO BE DEVELOPED

2.4 MULTNOMAH COUNTY OREGON

2.4 Multnomah County

TO BE DEVELOPED

2.3 Metropolitan Oregon Counties-Multnomah County

TO BE DEVELOPED

2.5 WASHINGTON COUNTY OREGON

2.5 Washington County

TO BE DEVELOPED

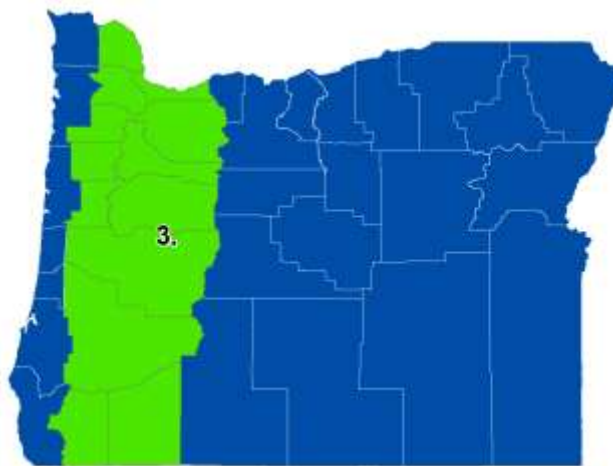
2.5 Metropolitan Oregon Counties-Washington County

TO BE DEVELOPED

3

Oregon Counties West of the Cascade Range

CSZ Area 3, Counties West of the Cascade Range



In Western Oregon Counties including Josephine, Jackson, Douglas, Lane, Linn, Benton, Marion, Polk, Yamhill and Columbia, (including areas of Washington, Multnomah and Clackamas Counties not described in the Oregon Metropolitan Counties shortfall

expectations) significant effects primarily related to shaking and impacts along rivers and roadways are to be expected. Freeways and associated bridges will be damaged, rail lines will be damaged or buried by landslides in multiple places, and communities will be isolated by interrupted roads through direct damage or landslide. Certain dike structures may fail causing localized flooding and possibly some deaths. Industrial plants in the area will experience emergency shutdown of processes which may result in some catastrophic failures and deaths/injuries at those plants. Some bulk storage facilities for petroleum or other hazardous products will rupture due to mechanical strain through shaking, sloshing of contents, or liquefaction of supporting soils. A certain percentage of this loss can be expected to escape secondary containment. Many of these facilities are associated with major cities along rivers and along Interstate 5. If this occurs during fish runs, entire reproductive year-groups may be lost. Severe environmental contamination will result. A mechanical rearrangement of Columbia River sediment may block shipping channels and create unexpected currents. All response activities adjacent to the Columbia River will need to be coordinated with State of Washington counties across the Columbia and Washington EMD.

3. Oregon Counties West of the Cascade Range

Western Oregon County shortfall expectations are:

- Electrical power will fail;
- Communications methods will largely fail. Surviving communication systems will degrade as generators run out of fuel;
- Normal response centers at police and fire stations will be disrupted in some areas but less so than on the coast;
- Bridges throughout Western Oregon may be severely damaged, fail or block vital traffic on the Columbia River;
- Smaller, rural communities may be isolated and require either re-supply of food and medicines or relocation of some residents;
- Large-scale shelter areas will have to be erected on short notice in larger urban areas;
- Multiple urban search and rescue teams will be required and possibly teams with specialized experience with industrial plants;
- Logistical support will likely come via Eastern Oregon through to surviving airports in Western Oregon Counties;
- Health centers will be damaged and operate at reduced capacity. Some patients will require relocation and injured will be treated by available means – probably not current standards of care;
- Pharmaceuticals supply will be severely reduced;
- Augmentation of personnel will be required for all elements of response, fire, police, security, emergency management, utility maintenance, shelter staffing, etc.;
- Immediate / initial response in the first 96 hours will be from local residents and resources;
- Many warning systems and methods used locally are not interconnected between neighboring jurisdictions i.e., Public System Answering Points (PSAP's / 911);
- Limited operational state of radio transmission / overloaded with high volumes of emergency responder traffic;
- Fuel and food deliveries will be required within one week. Diesel and gasoline are priority fuel deliveries for generators and responders. Propane will be needed for generators and heating;
- Generally, all fuel delivery via pipeline will be halted for a period of a month or more;
- Water and sewage treatment will be compromised and be out of service for an indefinite time.

3.1 BENTON COUNTY OREGON

3.1 Benton County

TO BE DEVELOPED

3.1 Oregon Counties West of the Cascade Range-Benton County

TO BE DEVELOPED

3.2 RURAL CLACKAMAS COUNTY OREGON

3.2 Rural Clackamas County

TO BE DEVELOPED

3.2 Oregon Counties West of the Cascade Range-Rural Clackamas County

TO BE DEVELOPED

3.3 COLUMBIA COUNTY OREGON

3.3 Columbia County

TO BE DEVELOPED

3.3 Oregon Counties West of the Cascade Range-Columbia County

TO BE DEVELOPED

3.4 DOUGLAS COUNTY OREGON

3.4 Douglas County

TO BE DEVELOPED

3.4 Oregon Counties West of the Cascade Range-Douglas County

TO BE DEVELOPED

3.5 LANE COUNTY OREGON

3.5 Lane County

TO BE DEVELOPED

3.5 Oregon Counties West of the Cascade Range-Lane County

TO BE DEVELOPED

3.6 LINN COUNTY OREGON

3.6 Linn County

TO BE DEVELOPED

3.6 Oregon Counties West of the Cascade Range-Linn County

TO BE DEVELOPED

3.7 JACKSON COUNTY OREGON

3.7 Jackson County

TO BE DEVELOPED

3.7 Oregon Counties West of the Cascade Range-Jackson County

TO BE DEVELOPED

3.8 JOSEPHINE COUNTY OREGON

3.8 Josephine County

TO BE DEVELOPED

3.8 Oregon Counties West of the Cascade Range-Josephine County

TO BE DEVELOPED

3.9 RURAL MARION COUNTY OREGON

3.9 Rural Marion County

TO BE DEVELOPED

3.9 Oregon Counties West of the Cascade Range-Rural Marion County

TO BE DEVELOPED

3.10 POLK COUNTY OREGON

3.10 Polk County

TO BE DEVELOPED

3.10 Oregon Counties West of the Cascade Range-Polk County

TO BE DEVELOPED

3.11 RURAL WASHINGTON COUNTY OREGON

3.11 Rural Washington County

TO BE DEVELOPED

3.11 Oregon Counties West of the Cascade Range-Rural Washington County

TO BE DEVELOPED

3.12 YAMHILL COUNTY OREGON

3.12 Yamhill County

TO BE DEVELOPED

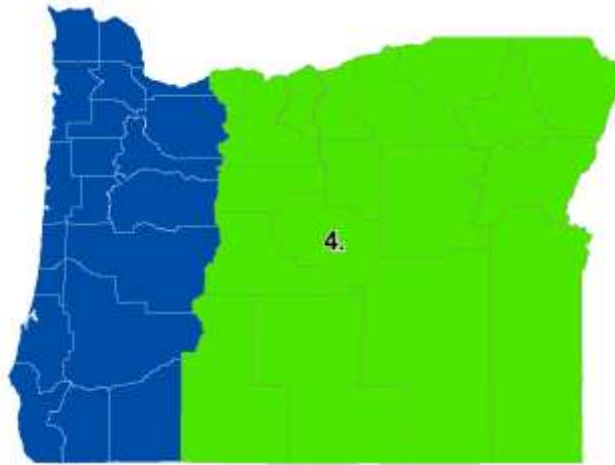
3.12 Oregon Counties West of the Cascade Range-Yamhill County

TO BE DEVELOPED

4

Counties East of the Cascade Range

CSZ Area 4, Counties East of the Cascade Range



In all **counties east of the Cascade Mountains**, effects related to the earthquake include: indirect impacts related to transportation corridors (roads, rail, and air), power disruption, supply side chain distribution (including fuel, food, and natural gas), demand for logistics and staging areas, shelter, and relocation of individuals and animals from

the impacted areas. Transportation interruptions and prioritization of emergency supplies to Western Oregon will disrupt raw material imports and finished-agricultural product export. Financially this is an extreme impact and alternate routing to ports of opportunity will be required. This will increase shipping costs, affecting Oregon's agricultural economy. Massive staging areas are likely to be required in various areas of Central and Eastern Oregon with the primary location of relief supplies likely at an established federal ISB at Roberts Field Airport in Redmond, Oregon, Deschutes County. River traffic on the Columbia River will be an important response and recovery lifeline. Mutual aid from Eastern Oregon local jurisdictions will be sought to the maximum degree possible. Many building inspectors, police, firefighters, medical personnel, engineers, and public works personnel may deploy to the impacted areas of Western Oregon.

4. Oregon Counties East of the Cascade Range

ALL COUNTIES EAST OF THE CASCADE RANGE TO BE DEVELOPED

A

Appendix A – Oregon County Map



Appendix A. Overview of Stafford Act Support to States

B

Appendix B

TO BE DEVELOPED IF NEEDED

C

Appendix C

TO BE DEVELOPED IF NEEDED