

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 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.

Cascadia Subduction Zone Catastrophic Earthquake & Tsunami Response Plan – COA Example

- 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 different jurisdictions, agencies and states.

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).

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.