OREGON DEPARTMENT OF AVIATION

October 6, 2021

Board work session

Part 2 – Resiliency, Legislative concepts, Aurora

PRESENTATION AGENDA

October 6, 2021

- Resiliency and Airports roles in Response
- Legislative Concepts
- Aurora Airport discussion

Resiliency – Wildfires and Jet A fuel

- 15 Fires still burning as of Oct 4st, 800K acres
- Jet fuel availability was an issue all summer (due to driver shortage)
- 97 PU airports, 34 have Jet fuel
- Total Jet storage (excluding Port of Portland)

  854K gallons

  337K gls eastern/gorge (15 arpts)

  381K gls valley (12 arpts)

  136K gls coast (6 arpts)

Small GA airports like Lakeview (supporting the Bootleg and Cougar Peak Fires) hardest hit (8K gls storage)

Fuel delivery delays and lack of storage capacity may persist in the 2022 fire season

$4M needed to add 12-15K gls storage tanks at 20 airports (10 eastern, 4 coastal, 6 valley)

Resiliency - Earthquakes

- "Airports and airfields in Oregon are critical to early disaster response efforts, serving as staging and distribution points for an anticipated national influx of critical supplies and resources into the region; however, significant planning and analysis are necessary to better understand and enhance the resilience of these facilities in order to more efficiently and effectively support incident response."

July 2021 Resiliency Assessment Report DHS - CISA

CSZ M9 - 9.5 months pregnant

- Cascadia Subduction Zone is a 700 mile fault line off Oregon's coast
- CSZ partial or full ruptures occur an average of every 250 years, producing a M8 – M9 quake
- Last rupture occurred 321 years ago
- We are "9.5 months pregnant"*
- Dependent on partial or full rupture, shaking will be 3-5 minutes (with liquefaction, subsidence and permanent ground deformation) followed by weeks or months of aftershocks**
- Tsunami waves of up to 100' height along the OR Coast**

*Allison Pyrch, GeoTech Engineer @ HartCrowser

** OR Seismic Safety Policy Advisory Commission

Sendai, Japan, M9, March 2011

Is the Coast toast?

16 public use airports on Coast	Elevation	inundated?*
Astoria	14	yes
Seaside	12	yes
Nehalem Bay	30	yes
Tillamook	**39**	**no**
Pacific City	10	yes
Siletz Bay/Gleneden Beach	**60**	**no**
Newport	**160**	**no**
Toledo	12	?
Wakonda Beach	41	yes
Florence	51	yes
Lakeside	20	yes
North Bend	17	yes
Bandon	**106**	**no**
Cape Blanco	**214**	**no**
Gold Beach	21	yes
Brookings	**326**	**no**

* Source – Resiliency report and DOGAMI

Sendai, Japan, M9 March 2011

Coastal airports as lifelines

- Resident population of coastal communities is 86K, w/summer tourists can be 200K
- Roads - Estimated time to clear and restore road access to the coast after a M9 event

  1-3 years depending on location
- Ports – 6 coastal ports estimated time to repair and restore

  TBD- all in inundation zone

- **Initial access to isolated/islanded portions of coast will be by air only**
- **Without drinkable water, electricity, fuel or food, most survivors will need to be airlifted out**

Restoration times*

	Coast	Valley
• Electricity	3-6 months	1-3 months
• Water/Sewer	1-3 yrs	1 mn – 1 yr
• Major hwys	2+ years	6-12 months
• Police & Fire		2-4 months
• Healthcare	3 years	18 months

- 76% of bridges will be damaged, with 40% significant (33% over water)
- 6,400 miles of highway at risk of landslide
- 16,000 miles of road experiencing permanent ground deformation

* Cybersecurity & Infrastructure Security Agency,

OR Seismic Safety Policy Advisory Commission

Oregon's Achilles heel

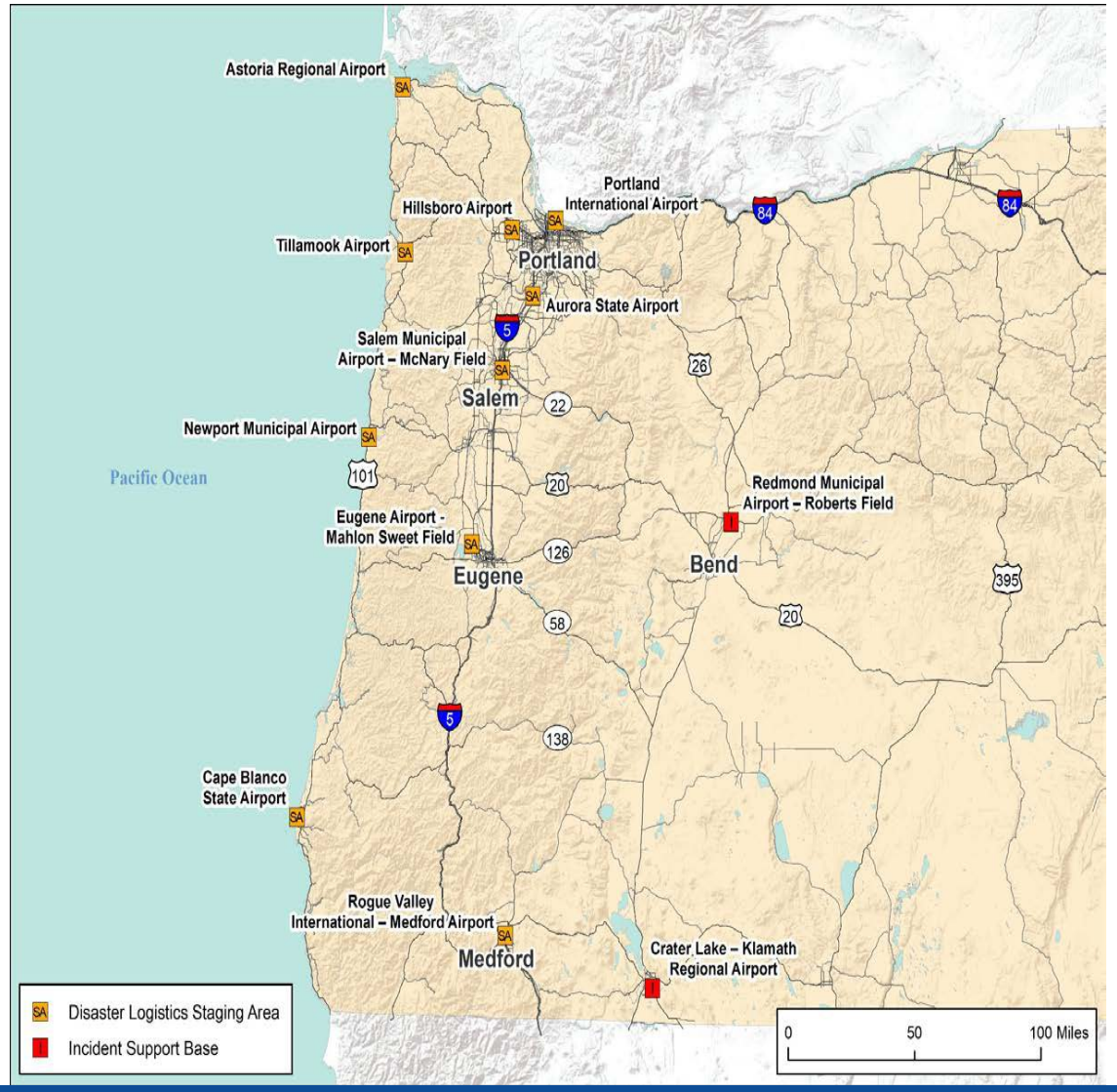
- Items needed to repair and restore; labor, equipment, materials, fuel and access
- Labor – access to workplace, stability of home & utilities
- Equipment – undamaged
- Materials – undamaged, accessible or brought in from unaffected regions
- Access – road repairs first
- Fuel – little repair is possible w/o fuel
- Refineries – 0, bulk storage terminals 3
- Fuel - 90% of Oregon's petroleum fuel storage is at the Portland Critical Energy Infrastructure Hub on the Willamette River. It stores less than one week supply of fuel, and it sits on soils expected to liquefy and slide into the river, resulting in river fire

CEI hub, Portland

Airports as lifelines

- **"First 4 days are pulling people out, the next 4-6 months are putting people in."**
  Dave Stuckey, OMD
- Oregon's population is 4M. Two-thirds live in western one-third of the state, with about 100K on the coast.
- A CSZ full rupture will run 700 miles (from Northern CA to British Columbia), will be felt in ID and MT, and will cause significant damage from the Cascades west (100 miles wide) with a population of 10M
- **Until the roads can be cleaned and repaired, air will be the only way to get resources into affected communities.**
- 95% of US civilian aircraft fleet is fixed wing aircraft, which require a runway
- FEMA grant app - $1.5M to study all 97 PU airports and roles, capabilities, needs, costs to implement, and event-proof operational logistics tool

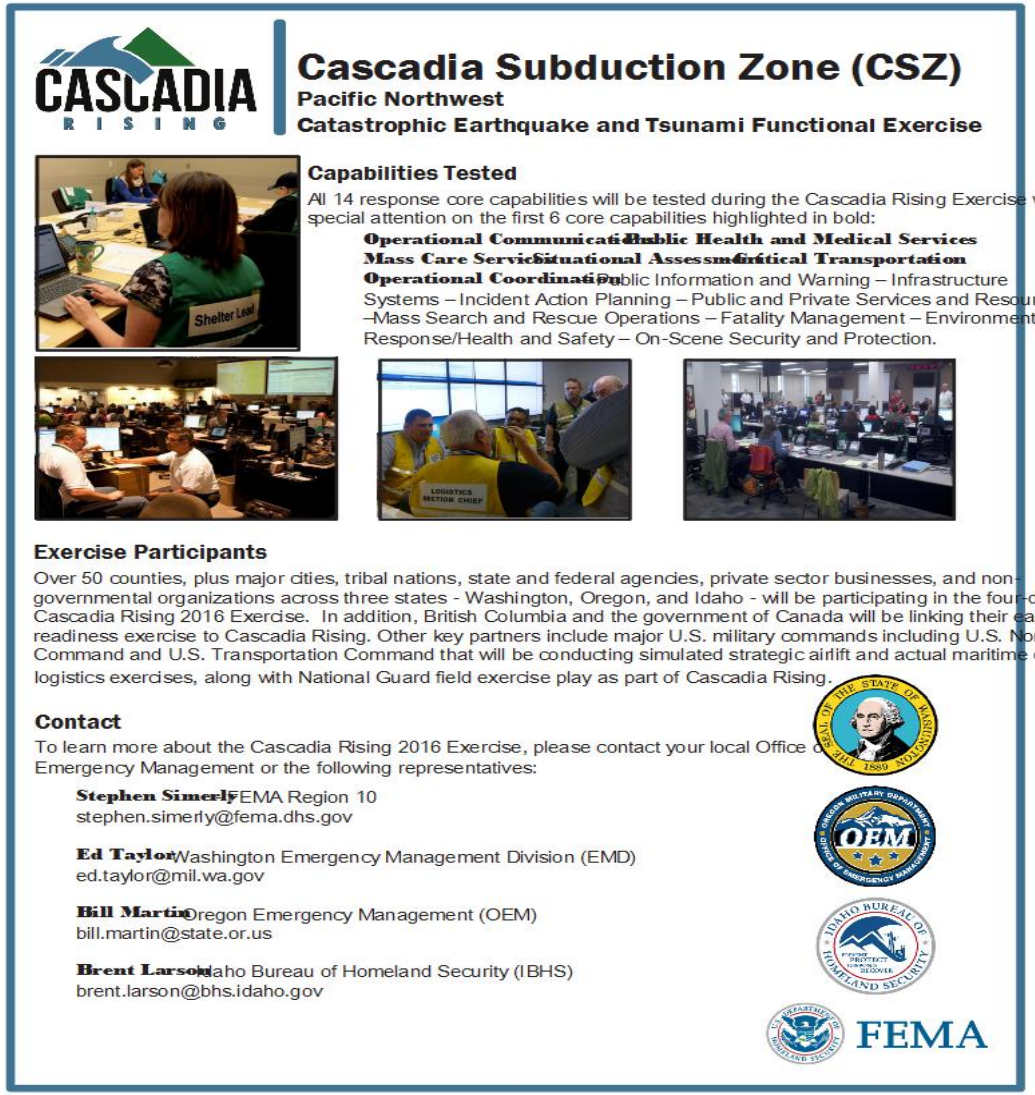
Staging & FEMA Mission Airports



- 12 airports designated as staging or FEMA support bases for government-led efforts
- Other airports will be used for civilian response (corporate America, faith-based, Good Samaritan and affiliation groups (such as AOPA)
- If any PNW community has a working runway, it will likely be used for response and recovery

Cascadia Rising 2022

- National Four day full scale exercise June 13-17, 2022
- 20-25,000 participants expected
- Local, state and federal agencies from WA, OR & ID
- Scenario starts 4 days after M9 event
- Testing operational coordination, Infrastructure systems, Mass-Care services
- ODA will participate
- **Airport managers – contact your County OEM and ask to participate**



CASCADIA RISING

Cascadia Subduction Zone (CSZ)

Pacific Northwest
Catastrophic Earthquake and Tsunami Functional Exercise

Capabilities Tested

All 14 response core capabilities will be tested during the Cascadia Rising Exercise witl special attention on the first 6 core capabilities highlighted in bold:

Operational Communicati Public Health and Medical Services
Mass Care Servic Situational Assessm Critical Transportation
Operational Coordinati Public Information and Warning – Infrastructure Systems – Incident Action Planning – Public and Private Services and Resource –Mass Search and Rescue Operations – Fatality Management – Environment Response/Health and Safety – On-Scene Security and Protection.

Exercise Participants

Over 50 counties, plus major cities, tribal nations, state and federal agencies, private sector businesses, and non-governmental organizations across three states - Washington, Oregon, and Idaho - will be participating in the four-day Cascadia Rising 2016 Exercise. In addition, British Columbia and the government of Canada will be linking their earth readiness exercise to Cascadia Rising. Other key partners include major U.S. military commands including U.S. North Command and U.S. Transportation Command that will be conducting simulated strategic airlift and actual maritime dis logistics exercises, along with National Guard field exercise play as part of Cascadia Rising.

Contact

To learn more about the Cascadia Rising 2016 Exercise, please contact your local Office o Emergency Management or the following representatives:

Stephen Simerly FEMA Region 10
stephen.simerly@fema.dhs.gov

Ed Taylor Washington Emergency Management Division (EMD)
ed.taylor@mil.wa.gov

Bill Martin Oregon Emergency Management (OEM)
bill.martin@state.or.us

Brent Larson Idaho Bureau of Homeland Security (IBHS)
brent.larson@bhs.idaho.gov

FEMA

Lunch!

The future meets the past,
on a perfect day at the Joseph Airport Fly-in,
photo courtesy Tony Beach

Legislative concepts

- Permanent General funding
- Move fees out of statute
- Technical correction adding Sustainable Aviation Fuels as subject to the Aviation fuel tax
- Funding for seismic retrofit of office building

Permanent general funding

- 62% of the operating budget is funded by the fuel tax
- 100% of the grant programs are funded by the fuel tax
- Pandemic related revenue reduction started April 2020 and has had a slow recovery
- A greater risk exists related to a catastrophic loss of revenue following a major seismic event, with a recovery time of 3-4 years
- ODA needs a stable funding source for the operating budget i.e. general funds ($2M/yr)

- If we wait to 'cross that bridge when we get there' it will be to late – the bridge will have collapsed (along with the ODA building and the agency)

Joseph Fly-in
photo courtesy Tony Beach

Moving fees out of statute, technical correction

- The following fees are set in statute:
  - Aircraft registration ($300K/yr)
  - Airport licenses ($5K/yr)

- Technical correction
  - Clarify that Sustainable Aviation Fuels are subject to taxation

Joseph OR,
photo courtesy Tony Beach

Seismic retrofit of office

- ODA office was build in 1955
  (66 years old)
- One story non-reinforced structure
- Built prior to any seismic code
- Will not withstand a moderate quake
- $ needed to retrofit it to 'life-safety' standards (stands long enough for occupants to exit the building)

Legislators requests

- Rep McLain would like to assist ODA and the Board with airport planning best practices
- Looking at what our counterparts in adjacent states do
- Will invite ODA to report to the Joint Transportation Committee at the January Legislative Days
- Possible outcome – update to the Airport Land Use Compatibility Guidebook, adopted by the SAB in January 2003

Aurora Airport

- 144 acre Airport in northern Marion County
- State-owned since 1953
- 4th busiest airport in OR
- 400 based aircraft, including fire suppression and air ambulance
- Home base for 49 helicopters, including heavy lift
- 1500 employees
- $1.9M in local taxes
- Substantial TTF operations

Aurora upcoming projects*

- 2022 Easement acquisition $825K
- 2023 Tree removal $509K
- 2024 EA for rwy extension $625K
- 2024 Rwy rehab phase 1 design $373K
- 2025 Rwy rehab phase 2 construct $2.4M
- 2027 Rwy ext – land acquisition & design $7.7M
- 2028 Rwy ext – construct $TBD
- **Five year total 22-27 $12.4M**

* contingent upon state or federal funding

View from the tower, Aurora Airport

QUESTIONS?