OSSPAC Presentation

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OREGON DEPARTMENT OF AVIATION

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PRESENTATION AGENDA

- ODAV – who we are, what we do
- HB 3058 (Airport Resiliency Report)
- The Day After…
- Airport return to service estimates
- Equipment needs
- Proposed grant program

Oregon Department of Aviation

- ODAV is a small 15-person state agency
- Located at the Salem Airport
- Provides services to the 97 public use airports and advice to local governments, register aircraft, inspect airports, small grant program
- Own or operate 28 airports

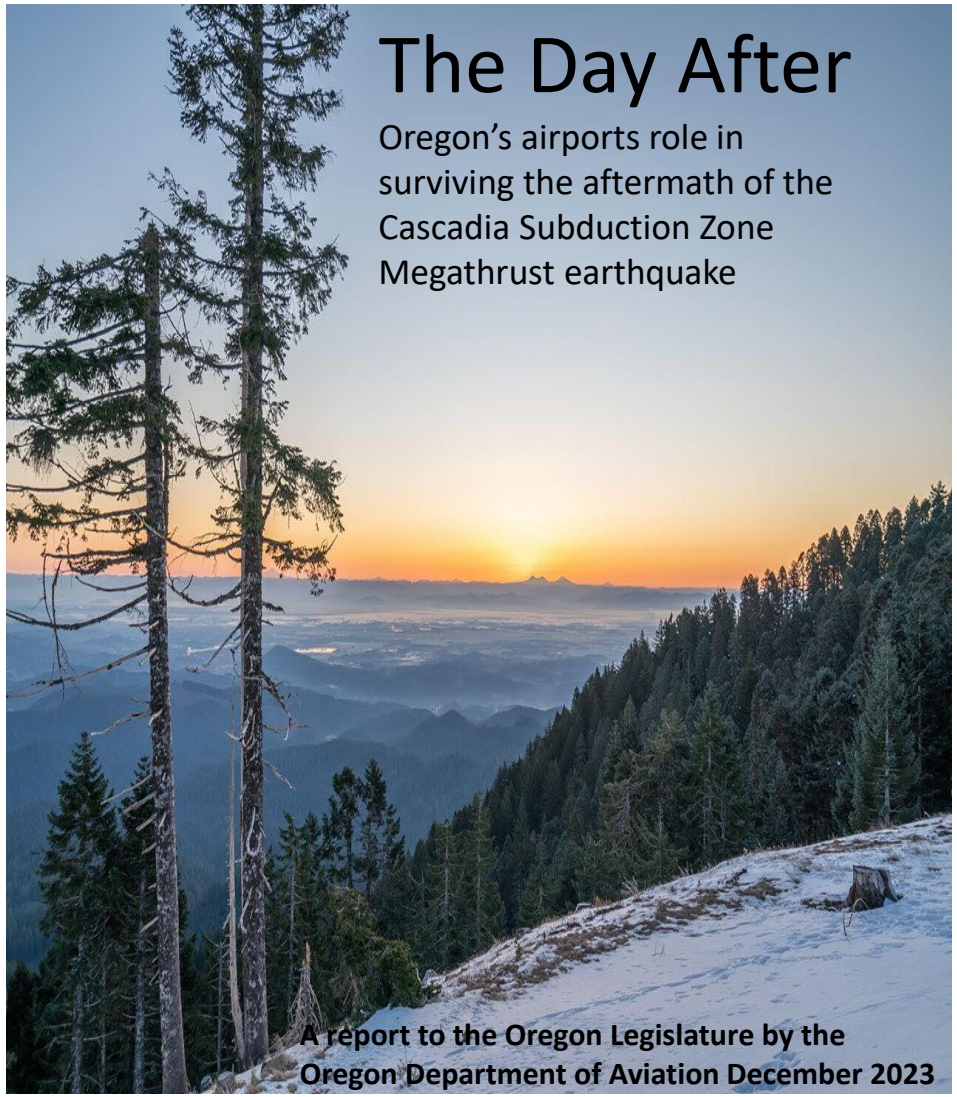
- Recently retired Director, part time work on projects including Resiliency report

HB 3058

- Sponsored by Representative Paul Evans, passed in May 2023
- Requires ODAV to report to the legislature by end of Dec. 2023 on airport resiliency, to rank airports, and to offer an investment and funding strategy for the legislature to consider
- Focuses on the role airports will play after a major natural disaster
- Requires ODAV to consult with other state agencies
- Six months to complete, no funding

The day after – Oregon's airports roles in surviving the aftermath of the Cascadia Subduction Zone Megathrust earthquake

- DRAFT report, currently in review by 15 organizations
  - 4 state agencies
  - 2 universities
  - 2 Emergency response orgs
  - 4 airports
  - Engineers
  - State Aviation Board
- Due to Legislature 12/31/23
- Proposes a grant program to purchase resiliency equipment for public–use airports



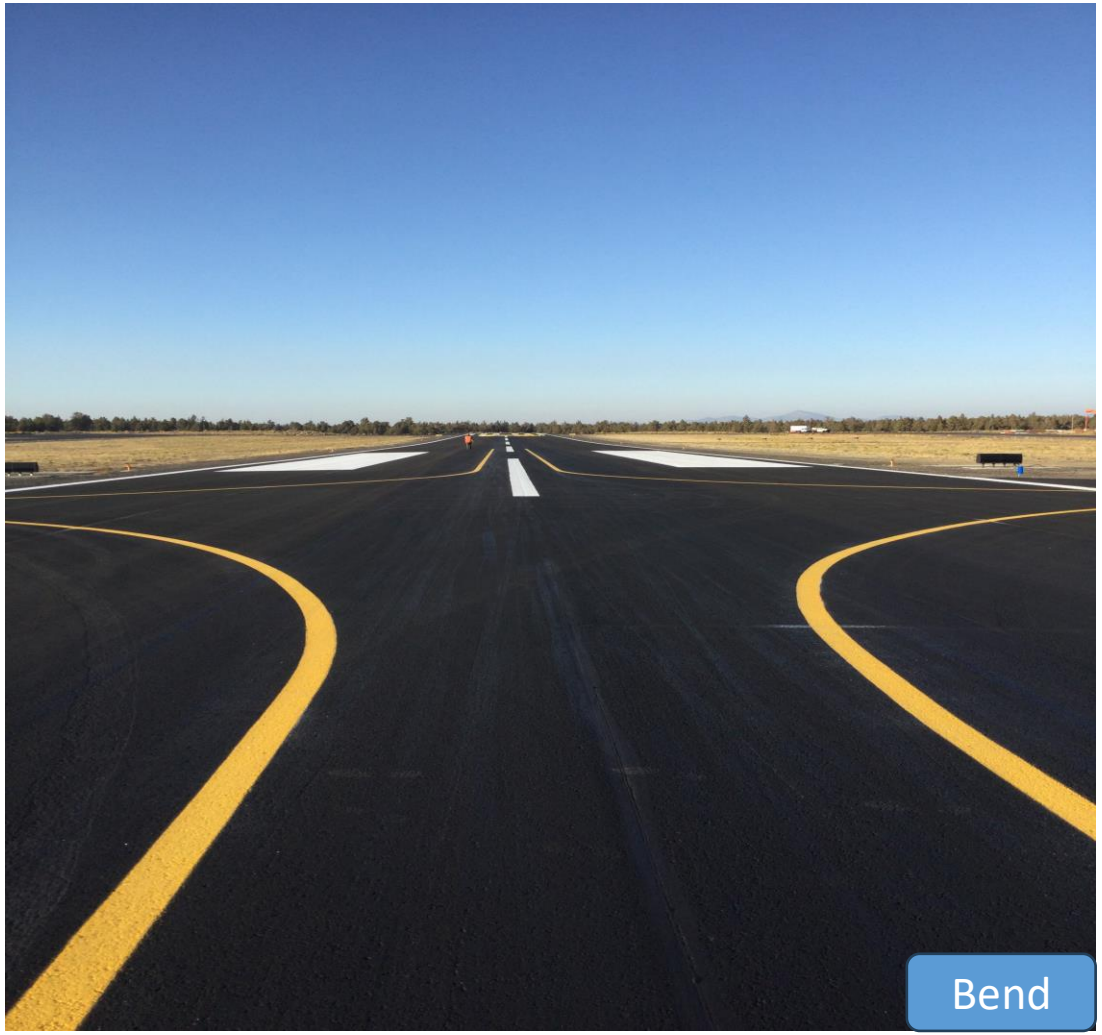
The Day after

- **Oregon has invested millions in ensuring our buildings will survive the earthquake. Now we need to ensure our people will survive the aftermath**.
- Restoration of critical infrastructure and services expected to take months or years.
- Until the roads can be cleared and repaired, airports will be the lifelines for affected communities.

- Survivability rule of 3's:
  - 3 minutes without oxygen
  - 3 days without water
  - 3 weeks without food

Response and recovery -Airports and aircraft

- While helicopters will play a major role in the response, only **5%** of the US aviation fleet are helicopters. The other 95% are fixed wing aircraft that require a runway.
- Oregon has 97 public-use airports
  - 17 Coastal
  - 16 Valley
  - 9 Portland
  - 6 Gorge
  - 7 Central
  - 21 Southern
  - 20 Eastern
- ORP (2013) lists 28 airports 'with the potential to maintain or quickly restore operational functions after a major earthquake'.



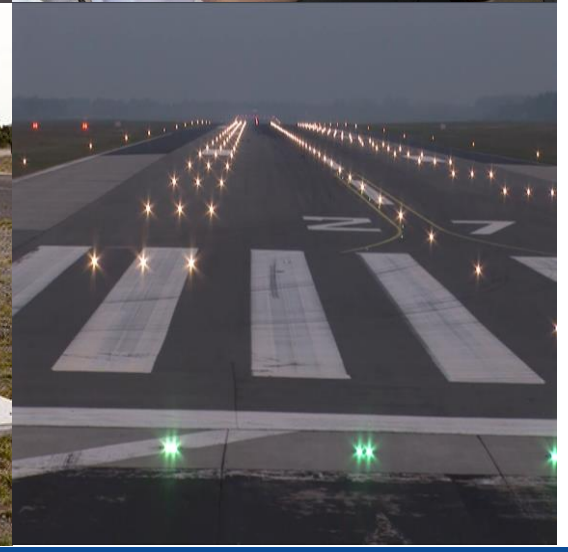
We have learned a lot in the past ten years

- ORP (2013) 28 airports operational immediately after the earthquake
- Albany, Aurora, Bandon, Brookings, Cape Blanco, Corvallis, Cottage Grove, Creswell, Eugene, Florence, Gleneden Beach (Siletz Bay), Grants Pass, Hillsboro, Independence, Klamath Falls, Lebanon, McMinnville, Medford, Myrtle Creek, Newport, Portland Heliport, PDX, Redmond, Roseburg, Salem, Scappoose, Tillamook, and Troutdale.

- Today (2023) 25 airports immediately (1-3 days) after the earthquake
- Arlington, Baker City, Bend, Boardman, Burns, Chiloquin, Christmas Valley, Condon, Enterprise, Hermiston, John Day, Joseph, Klamath Falls, La Grande, Lakeview, Madras, Malin, McDermitt, Ontario, Pendleton, Prineville, Redmond, Sisters, Sun River, Wasco
- **All in central & eastern Oregon**

Aviation is a highly regulated industry

- Anything that touches the aircraft is regulated
  - Manufacturing
  - Maintenance
  - Pilots
  - Passengers/cargo
  - Aircraft owners/operators
  - Airspace
  - Airports



A runway is not a (big) road

FOD – Foreign object debris/damage

Airfield pavements have a very different standard of care than roads. The pavement must be completely free of any contaminants (snow/ice, debris, rocks, etc.)

737's are called vacuum cleaners because the bottom of the engine is 18" off the ground and it will suck up anything in its path (including animals and humans). A small rock can destroy this engine, so airfield pavements have to be clean enough to eat off. Engine ingestions can (and have) cause catastrophic engine failure and loss of life.

Airport operational minimums after the earthquake

- Pavement
  - At least one runway, its parallel and stub taxiways, and at least one aircraft parking apron must have:
  - Cracks and holes less than 3” wide or deep.
  - Lips no greater than 3”
  - Clear of all debris
- Markings clear, accurate and visible under VFR conditions
- Adjacent safety areas clear of obstructions
- If liquefaction suspected, or pavement has been submerged, proof rolling to verify pavement stability and strength
- Assumes daytime VFR operations only

Surigao runway damage

Estimated reopening time

1-3 days (25)

Central and eastern Oregon airports

Within one month (11)

Aurora, Cape Blanco, Eugene, Independence, McMinnville, Medford, Newport, Portland Hillsboro, Portland Int'l, Salem, Tillamook

Within three months (8)

Albany, Brookings, Corvallis, Creswell, Hood River, Portland Troutdale, Scappoose, The Dalles

Salem

Airport Facility needs

- Fuel
  - CEI Hub - Oregon's Achillies heel
  - 90% of Oregon's petroleum fuels are stored at the CEI hub
  - After the earthquake, fuel will be limited to on-site inventory only
  - OR airports have a combined total storage of 4.1M gallons, but 91% of that is located at airports west of the Cascades (and 68% is located at a single airport (PDX)
  - Eastern OR airports will need additional fuel and storage to support aircraft bringing resources into staging areas
- Pavement
  - No hardened runways in US (yet)
  - PDX in design to harden half of the south runway (cost estimate $200-300M)
  - From a design perspective, PDX is very challenging due to location & liquefaction
  - We need at least 4 hardened runways in the Valley and Coast, and hardened helipads at all western OR public use airports


CEI Hub

Grants Pass

Airport Facility needs

- Communications
  - Airport staff must be able to communicate with arriving/departing aircraft even w/o electricity
  - Cellular on Wheels (short range) and mobile radio stations with Unicom and CTAF frequencies can bridge the gap
- Water/Sewer
  - It may take weeks to set up a temporary water distribution system, and airports will need a way to bridge the gap with temporary water supply for on-site workers
  - Basic sanitation facilities will be needed to avoid ground contamination
- Power
  - Most equipment needs fuel or power to operate. Until the electrical grid is restored, airports will need alternate fuel and solar options.

New Orleans airport after Katrina

Potential funding sources

- Federal funding - About half of OR's airports are eligible for federal funding from the FAA, but resiliency projects are not AIP-eligible
- State funding – ODAV has a small grant program (about $2M/yr) but mostly used for matching share on federal grants
- OEM SPIRE grant (equipment for first responder agencies) uses state general funds
- Resiliency report proposes a new grant program called the **Statewide Airport Resiliency Assistance (SARA)** program using general funds

What equipment would it would fund?

- Generators
- Sweepers
- Communications (COWs)
- UAS (drones)
- Forklifts
- Loaders
- Fuel storage
- Message Boards
- Communications (Unicom and CTAF)
- Water storage and purification
- Portable lighting
- Aircraft traffic control (ground)







SARA grant program

- Statewide Airport Resiliency Assistance
- Patterned after state OEM's SPIRE grant program
- Administered by ODAV or OEM
- Grant applications reviewed and ranked by a committee of emergency management experts
- Approved by the State Aviation Board
- Two-year pilot program, funded at $10M/year for two years
- Annual report to the Legislature

PDX cargo ramp

QUESTIONS?

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