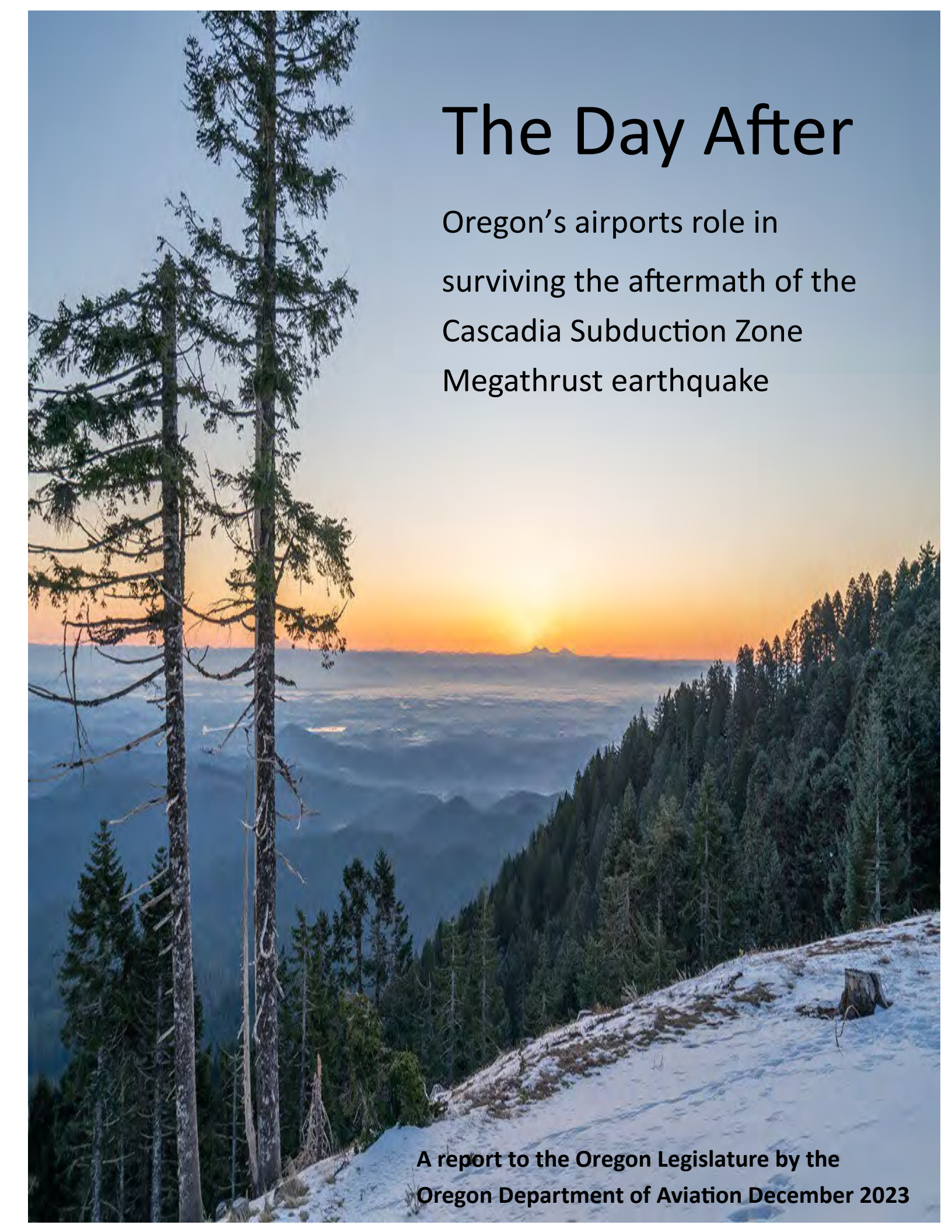




The Day After

Oregon's airports role in
surviving the aftermath of the
Cascadia Subduction Zone
Megathrust earthquake

**A report to the Oregon Legislature by the
Oregon Department of Aviation December 2023**

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Oregon has invested millions in ensuring our buildings will survive the earthquake.
Now we need to ensure our people can survive the aftermath.

Acronyms

ASAP	Aviation System Action Plan
ATC	Air Traffic Control
CSZ	Cascadia Subduction Zone
CEI	Critical Energy Infrastructure Hub
FAA	Federal Aviation Administration
FBO	Fixed Base Operator
GPS	Global Positioning System
ILS	Instrument Landing System
JetA	Jet fuel, type A
100LL	Aviation Gasoline, low-lead
ODAV	Oregon Department of Aviation
ODEM	Oregon Department of Emergency Management
ORP	Oregon Resilience Plan
PCL	Pilot controlled lighting
PDX	Portland International Airport
RNAV	Area Navigation
SARA	Statewide Airport Resiliency Assistance
TIZ	Tsunami Inundation Zone
VFR	Visual Flight Rules
UNICOM	Universal Communications

Executive Summary

Oregon has invested millions in ensuring our buildings will survive the earthquake. Now we need to ensure our people will survive the aftermath.

About 3.7 million Oregonians live west of the Cascade mountains, in the areas most likely to experience a moderate to severe impact from a Cascadia Subduction Zone megathrust earthquake.

When the CSZ megathrust earthquake occurs, until the roads can be cleared and repaired, airports will be the lifeline for affected communities. Oregon has 97 public use airports available to assist in response and recovery, but they will need some specialized equipment to fulfill that role, and some Valley and coastal runways and helipads will need hardening if they are to stay operational immediately after the event.

The 2023 legislature passed **HB 3058**, which directed the Oregon Department of Aviation to study airport resiliency and report back to the legislature by January 1, 2024. A group of 15 stakeholders, representing state and local governments, airports, academia, subject matter experts, and emergency preparedness organizations assisted in the development and review of this report. (See Appendix C for a list of participants.)

Major findings:

Response and recovery

During the CSZ earthquake, multiple critical infrastructure systems will fail simultaneously. It will take weeks or months to repair and restore these systems. In the interim, and until the roads can be cleared and repaired, Oregon’s airports will play a critical role as the primary means to bring resources into western Oregon.

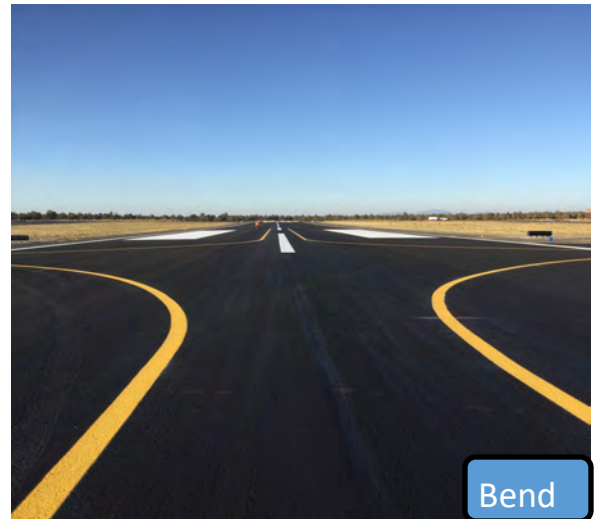
Fuel

Almost all aircraft (and most repair equipment) require fuel to operate. Oregon’s primary fuel storage and distribution facility (located in Portland on the banks of the Willamette River) is expected to sustain major damage during the earthquake. Until it (and the refineries that supply it) can be repaired, Oregon will have to acquire fuel from states east of the Cascades. **Over 90% of Oregon’s aviation fuels are stored west of the Cascades, with 70% of it stored at one airport (PDX).** Central and eastern Oregon airports have limited storage capacity. **Adding fuel storage capacity at airports across Oregon will position the airports to handle the needs of aircraft responding to the disaster.**



Pavement

No airport in the US currently has a runway capable of surviving a megathrust earthquake. (But PDX is in the design phase to harden the south runway.) While helicopters will play a major role in the response, they make up only 5% of the US aviation fleet. The other 95% are fixed wing aircraft that require a runway. Airport safety standards are set by the Federal Aviation Administration, and no airports in western Oregon are expected to be able to be immediately operational (1-3 days after the event). Eastern Oregon airports are expected to sustain minor damage and be operational immediately, to support an expected national response. **To provide the lifeline to Oregon's most densely populated areas, at least four western Oregon runways should be hardened, as well as at least one helipad at each western Oregon airport.**



Equipment

Oregon's airports will need specialized equipment, pre-staged at the airports, to support their roles in the response and recovery. Federal transportation funds (from the FAA) cannot be used for resiliency projects or equipment. Few Oregon airports can afford to purchase this equipment on their own, and very limited state funding opportunities exist. Airports with runways that have been submerged or that have suspected liquefaction must verify the strength and stability of the pavement (through proof-rolling) prior to reopening. Few Oregon airports have this capability.

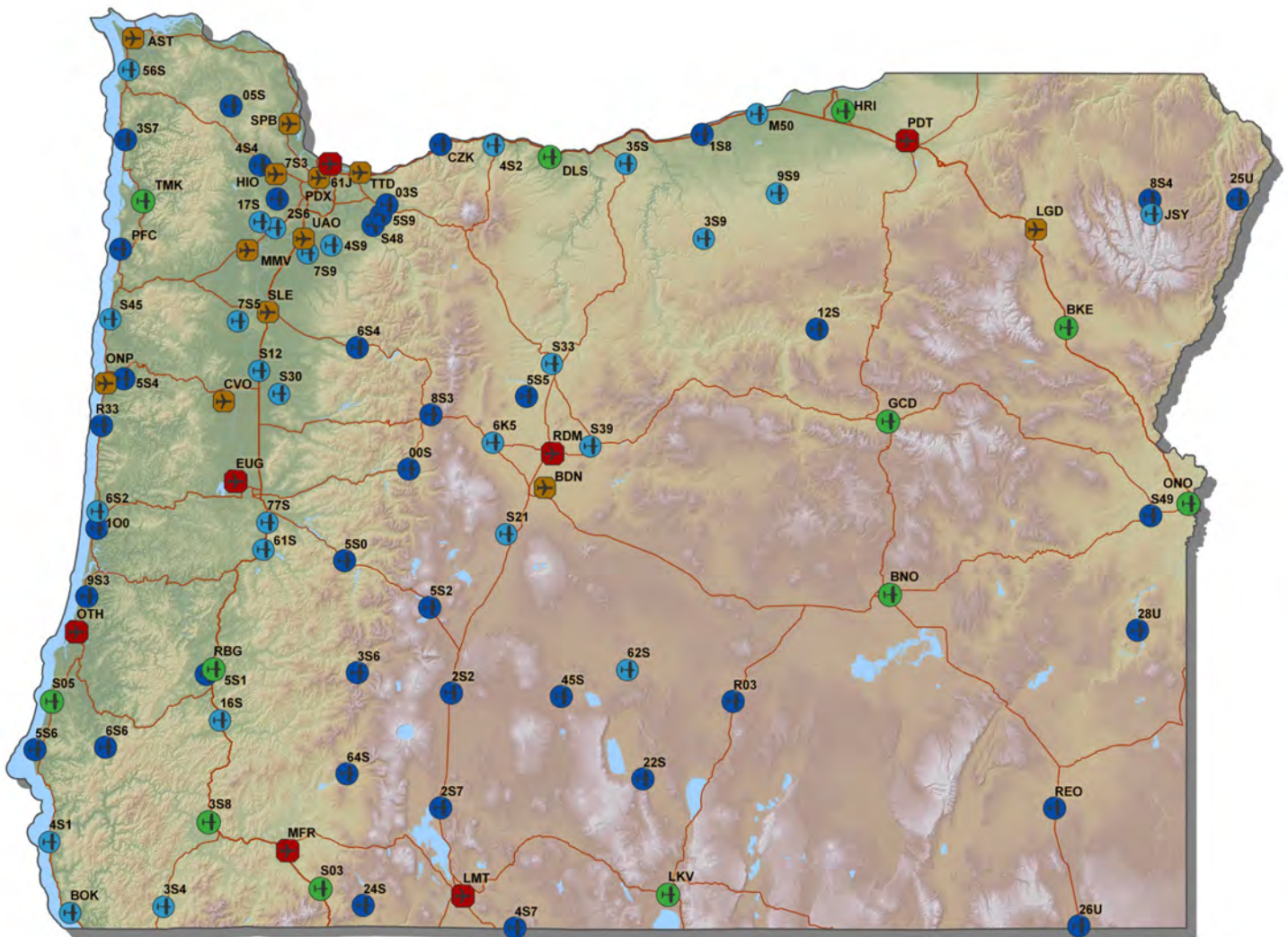


Statewide Airport Resiliency Assistance (SARA) proposed grant program

This report suggests **establishing a two-year pilot program for funding of resiliency related equipment for publicly-owned, public-use airports in Oregon.** The grant program could be administered by either the Oregon Department of Aviation or the Oregon Department of Emergency Management.

Similar to OEM's SPIRE grant program (equipment for first responders), SARA would provide grants to airports to purchase specific pieces of resiliency related equipment for pre-staging at airports across Oregon, to support the response and recovery after a megathrust earthquake (as well as wild-fire suppression support).





Snapshot of Oregon's system of airports

of Public-use airports: 97

Coastal - 17

Valley - 16

Portland—10

Gorge—6

Central—7

Southern—21

Eastern—20

Airports with air ambulance bases: 15

Airports w/wildland firefighting aircraft: 11

Airports with Coast Guard stations: 3

Airports with a control tower: 11

Airports with commercial airline service: 7

Airports with scheduled air cargo operations: 14

Airports with fuel services: 52

Airports with Uncrewed Aerial system test sites: 3

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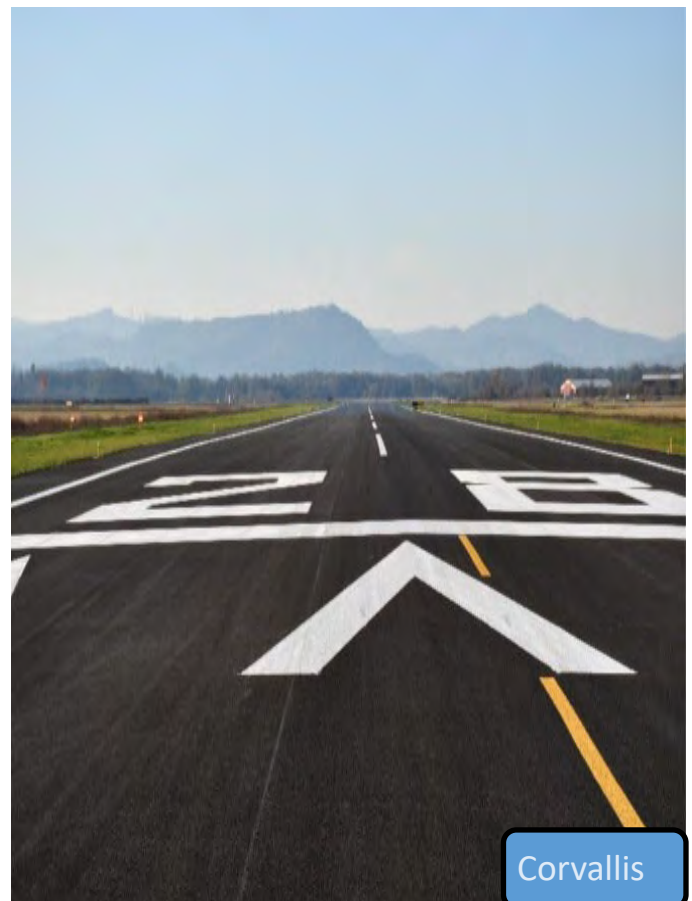
Chapter 1 — Introduction

HB 3058 In May of 2023, the Oregon Legislature passed HB 3058, which directed the Oregon Department of Aviation (ODAV) to study airport resiliency and report back to the Legislature by January 1, 2024. It directed ODAV to consult with other state agencies and stakeholders about the roles airports will play following a major natural disaster and determine what unmet needs the individual airports will have in order to accomplish their mission. Other federal, state and local agencies have studied Cascadia, and the intent of the bill sponsor (Rep. Paul Evans of Independence) was not to duplicate previous efforts, but to focus on the role airports will play and develop a funding strategy for the Legislature to consider.

Subduction Zones are capable of generating the strongest earthquakes on the planet. The Cascadia Subduction Zone (CSZ - which runs parallel to the West Coast for 620 miles from northern California to British Columbia) averages a megathrust earthquake (magnitude 7 or higher) about every 250 years, and an M8—9 every 320 years. It has been 324 years since the last megathrust earthquake.

Whether the CSZ has a partial or full rupture, and whether it starts on the northern or southern end or somewhere in between, it will have a significant impact on the 10 million people who reside in the moderate to severe impact zones west of the Cascades, including 3.7 million in western Oregon.¹ Immediately after the event, and **until the roads can be cleared and repaired, airports will be the lifeline for getting resources into the affected communities.**

Oregon has invested millions in ensuring our buildings will survive the earthquake. Now we need to ensure our people will survive the aftermath.



¹ Oregon Secretary of State, County populations, 2022

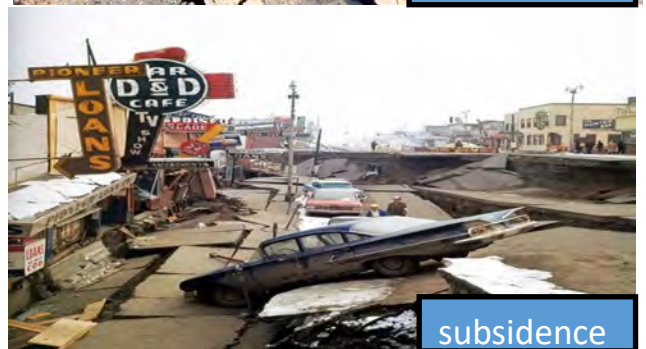
Brief summary of the CSZ threat

Earthquakes are measured by the amount of energy they release and are classed on a magnitude scale of M1 - M9. The strongest recorded earthquake on the planet was a M9.5 subduction zone earthquake that occurred in Chile in 1960.³ Megathrust earthquakes (M7 or higher) only occur on subduction zones.

The scientific community currently estimates there is a 37% chance of a M7+ CSZ earthquake occurring in the next 50 years.⁴ When the CSZ ruptures, depending on whether it is a partial or full rupture, the ground will shake for 5-7 minutes.⁴

During the shake, some areas will experience liquefaction (when the soil loses its load bearing ability and turns into a consistency of chocolate pudding), deformation (twisting), subsidence (the ground drops by inches or feet) or uplift (the ground rises by inches or feet), lateral spread (deep cracking), landslides/rockslides and tsunamis (a column of water generated off shore traveling at high speed towards the shore). Critical infrastructure such as powerlines, water, sewer and roads will sustain major damage. 1900 bridges are expected to sustain significant damage or collapse, and police, fire and hospitals buildings will be unusable for months or years.⁵ Aftershocks are expected to occur for months .

The most severe impacts of the CSZ megathrust earthquake are expected to be in the areas west of the Cascades. In the days and weeks following the event, an Influx of resources are expected to arrive from other parts of the country, but will be stopped by unusable roads crossing the Cascades and Columbia River Gorge. Getting the resources across the mountains will require the use of aircraft. And while helicopters will play a major role in the initial response, helicopters make up only 5% of the US aviation fleet.² The other 95% are fixed wing aircraft, which require a runway. Fortunately, Oregon has **97 public use airports** across the state to help bring in resources and transfer injured survivors and evacuees.



² FAA Administrators Fact Book, 2022

³ OR Department of Emergency Management website

⁴ OR Department of Emergency Management website

⁵ Oregon Resilience Plan, 2013

Recovery time

After the CSZ megathrust earthquake, the recovery time will be lengthy. For the Coast, electricity is currently expected to be out of service for 3-6 months, water and sewer for 1-3 years, and health care facilities for 3 years. In the Willamette Valley, electricity is currently expected to be out for 1-3 months, water and sewer for 1–12 months, major highways for 6-12 months, health care for 18 months, and police and fire for 2-4 months.⁶

3.7 million Oregonians live in the moderate to severe impact areas and may need significant assistance to survive following the earthquake. While most will survive the initial event, many may die due to the lack of water, untreated medical conditions or injuries, and lack of food and medicine. In emergency preparedness, **a ballpark rule of thumb for survivability is three minutes without oxygen, three days without water, and three weeks without food.**

Resources are expected to pour in from other parts of the country, but until the roads can be cleared and repaired, resources will have to either be airlifted over the mountains or arrive along the coast by water. And while Oregon’s coastal communities may be able to access assistance from ocean-going vessels, the navigable inland waterways may be clogged with debris from downed bridges as well as a potential fossil fuel fire in the Willamette River in Portland next to the CEI distribution hub.⁷ The western third of Washington as well as northern California is expected to face similar challenges.



Oregon Resilience Plan

The Oregon Resilience Plan (2013) identified 28 airports that have “the potential to maintain or quickly restore operational functions after a major earthquake”.⁸ These airports are 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 Helipad, Portland International, Redmond, Roseburg, Salem, Scappoose, Tillamook and Troutdale.

^{6, 8} Oregon Resilience Plan, 2013

⁷ Eco Northwest, Impact of fuel release from CEI Hub, 2020

Assumptions

For the purposes of this report, ODAV assumed that most of the 17 coastal public use airports will sustain significant damage from the tsunami and require several months to repair and become operational. The exceptions are Tillamook, Gleneden Beach(Siletz Bay), Newport, Bandon, Cape Blanco and Brookings, which are outside the tsunami inundation zones.

ODAV also assumed that airports in central and eastern Oregon will sustain little or no damage and will remain operational or recover within one week after a major earthquake. These airports include The Dalles, Hood River, Wasco, Condon, Lexington, Arlington, Boardman, Hermiston, Pendleton, La Grande, Baker City, Ontario, Enterprise, Joseph, John Day, Madras, Prineville, Redmond, Bend, Sunriver, Chiloquin, Lakeview, John Day, Burns and McDermitt.

Other studies

For this report, ODAV reviewed previous studies including:

- The Oregon Resilience Plan, Oregon Seismic Safety Policy Advisory Commission (OSSPAC), 2013
- Tsunami Resilience on the Oregon Coast, OSSPAC, 2021
- Oregon Transportation Systems Resiliency Assessment, Cybersecurity Infrastructure Agency, 2021
- Mass Care and Mass displacement after a CSZ Earthquake, OSSPAC, 2018
- CSZ Earthquakes—an M9 Scenario, Cascadia Regional Earthquake Workgroup, 2013
- Impact of fuel release from the CEI Hub due to a CSZ earthquake, ECO Northwest, 2020
- Resiliency 2025—Improving our readiness for the Cascadia Earthquake and tsunami, Governors office, 2018
- Scappoose Industrial Airport Resiliency Plan, Port of Columbia County 2020
- Hillsboro Airport Seismic Resilience Assessment, Port of Portland, 2019
- Grants Pass Airport Resiliency Assessment, Josephine County, 2023
- Newport Airport Resiliency Assessment, City of Newport, 2018
- Oregon Aviation Plan, OR Dept of Aviation , 2018

Chapter 2 —Operational recovery time

HB 3058 directed ODAV to develop a tiered system of designation for airport recovery time (the amount of time needed for an airport to become operational following an event):

- Tier 1 facilities that can be prepared for providing event assistance, limited response support and **immediate** post-event flight activities,
- Tier 2 facilities that can be prepared to provide assistance, support and return to flight activities within **one month**,
- Tier 3 facilities that can provide assistance, support, and return to flight activities within **three months**,
- Special function facilities

There are very few airport-specific assessments of recovery time for Oregon’s public use airports. Where these assessments have been completed, ODAV used that data to determine recovery time. Where the data did not exist, ODAV used other published documents like the *Oregon Resilience Plan* and the *Oregon Transportation Systems Resiliency Assessment* to assist in determining recovery time.

The Oregon Resilience Plan (ORP, 2013) identified 28 airports across Oregon that “have the potential to maintain or quickly restore operational functions after a major earthquake.” These airports were 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, Portland Int’l, Redmond, Roseburg, Salem, Scappoose, Tillamook and Troutdale.

Additional research has been completed in the ten years since the ORP was published. For example, we now know that some valley and coastal airports sit on liquefiable soils, and are not likely to be able to resume aircraft operations immediately after the earthquake. This report adjusts the airports listed in the ORP based on current knowledge.

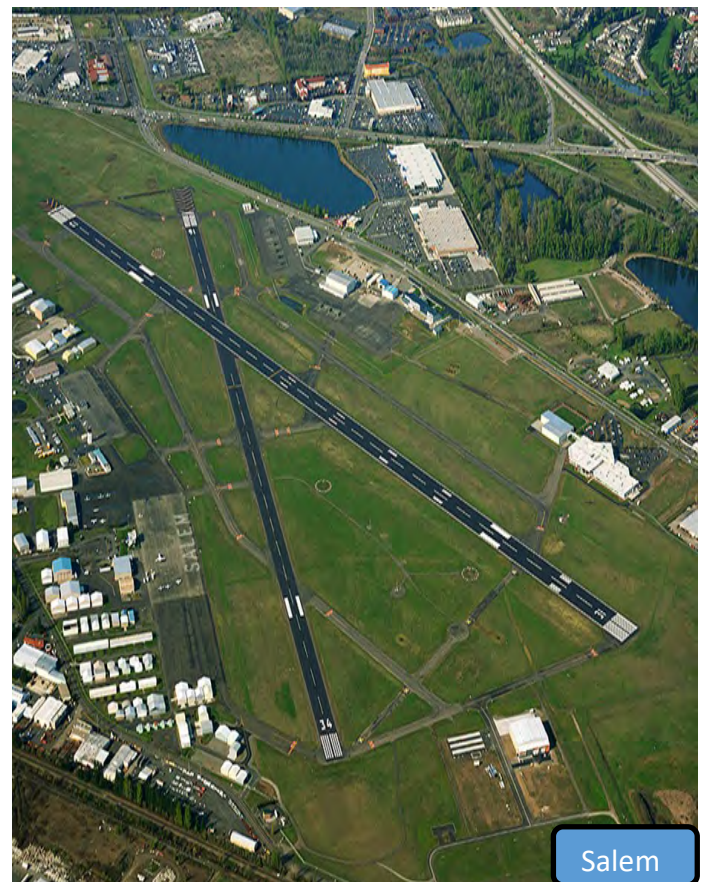


ODAV believes the airports east of the Cascades will sustain limited damage and will play a major role in earthquake response and recovery. As resources arrive in central and eastern Oregon, from other parts of the country following the event, they will need to be transported to the impacted areas by aircraft (until the roads are cleared and repaired). While much of the initial response will be led by the government sector, the private sector is expected to mount an equal response, whether it be from corporations seeking to assess their properties and assist their employees in the impacted areas, or from good Samaritan and affiliate groups such as the aviation community and faith-based organizations. **Most Oregon airports with a functioning runway are expected to be used for some type of response and/or recovery effort.** The airports closest to a federal staging area (such as the airports surrounding the Redmond airport staging base) are likely to be utilized as overflow and supplemental staging areas.



For purposes of this report, ODAV assumed that the airports west of the Cascades:

- A) would initially have no electricity, and would therefore be limited to daytime, visual flight rules (VFR) operations only.
- B) at airports with control towers, those towers would not be operational due to lack of power and personnel.
- C) aircraft fuel will be limited to on-site inventory only, with replacement fuel unavailable.
- D) at coastal airports located in tsunami inundation zones, the airports would be non-operational for weeks or months until the runways, taxiways and aprons can be cleared of debris and the pavements tested for stability and load bearing strength.
- E) at airports located in the Cascade mountains, the airports would be non-operational for weeks or months due to rockslides and inaccessible roads.



HB 3058 required ODAV to assign the 97 public-use airports into tiers, based on the amount of time it would take for the airport to become operational after the earthquake. Tier 1 is all airports that remain **immediately** operational after the earthquake. Tier two are those airports that could be operational within **one month**. Tier three are the airports that could become operational within **three months**.

For an airport to return to operational use, at least one runway, its parallel and stub taxiways, and at least one aircraft parking apron must meet all of the following:

- cracks less than 3" wide or deep
- pavement lips no greater than 3"
- pavement clear of all debris
- pavement markings clear, accurate, and visible under VFR conditions
- adjacent safety areas clear of obstructions
- If liquefaction is suspected, or if pavement has been submerged, proof rolling to verify pavement stability

For purposes of this report, the factors considered for estimating time to become operational included:

- likelihood of liquefaction, deformation, subsidence, landslide or rockslide, or tsunami damage
- proximity to major highway
- ground access (for repair equipment access)
- availability of on-site personnel to restore operations



Tier 1 – Airports with immediate (1-3 days) operational capability (33)

Airports WEST of the Cascades

None at present

Airports EAST of the Cascades (33)

Redmond, Bend, Madras, Prineville
Sunriver, Sisters, Christmas Valley
Klamath Falls, Chiloquin, Malin, Lakeview,
Wasco, Condon, Arlington, Boardman, Hermiston,
Pendleton, La Grande, Baker City, Ontario, Joseph,
Enterprise, John Day, Burns, McDermitt, Memaloose,
Lexington, Monument, Rome, Vale, Alkali Lake, Beaver
Marsh, Christmas Valley

Tier 2 - Airports operational within ONE MONTH (11)

Airports WEST of the Cascades (

Portland International	Medford
Portland Hillsboro	Tillamook
Aurora	Newport
Salem	Cape Blanco
Independence	McMinnville
Eugene	Hood River
The Dalles	

Airports EAST of the Cascades

all Tier 1

Tier 3 - Airports operational within THREE MONTHS (8)

Airports WEST of the Cascades (8)

Portland Troutdale
Scappoose
Brookings
Albany
Corvallis
Creswell

Airports EAST of the Cascades

all Tier 1

Airports operational within 6-12 months (19)

Gleneden Beach /Siletz Bay	Portland Helipad	Ashland	Astoria
Wakonda Beach	Illinois Valley	Grants Pass	Florence
Bandon	Myrtle Creek	Roseburg	Sandy
Lebanon	Cottage Grove	Mulino	Sandy River
Hubbard	Gates	Paisley	

Airports needing one or more years to reopen (22)

North Bend	Vernonia	Twin Oaks
Seaside	Newberg (Sportsman)	Newberg (Chehalem)
Manzinita (Nehalem Bay)	Pinehurst	Prospect
Pacific City	Toketee	Gold Beach
Lakeside	Oakridge	Santiam Junction
Cascade Locks	McKenzie Bridge	Crescent Lake
Powers	Toledo	Cornelius (Skyport)
Silver Lake		

Chapter 3—Airport facility needs

Oregon has 97 public use airports (17 on the coast, 16 in the valley, 9 in Portland, 6 in the Gorge, 7 in central Oregon, 21 in southern Oregon, and 20 in eastern Oregon). (See appendix A for details.) Immediately following the megathrust earthquake (and until the roads can be cleared and repaired) the airports will be the only way to get resources into the impacted areas, and people out. There are 10 million people in the moderate to severe impact zones, (including 3.7 million in Oregon) that may need substantial assistance until the critical infrastructure (water/sewer, electrical, health care, food , shelter and roads) can be restored.

For Oregon’s airports to assist in the response and recovery efforts, they will need clean and usable pavement (runways, taxiways and aprons) plus specific equipment already staged at the airport.

All airports will need basic items such as fuel storage, communications, cargo processing equipment and storage areas.

The coastal airports outside the tsunami inundation zones, as well as the valley airports, will also need solar-powered equipment, diesel fuel storage, construction equipment, pavement cleaners, and water storage and purification.

For the commercial service airports and the high traffic volume valley airports, a more robust communication system is recommended.

For airports east of the Cascades, where damage is expected to be minor, return to operational status may take a few hours or days. Many of these 32 public use airports are expected to become the staging or overflow areas for resources arriving from the rest of the country, and the stopping point for refueling before crossing the Cascades into the impacted areas.

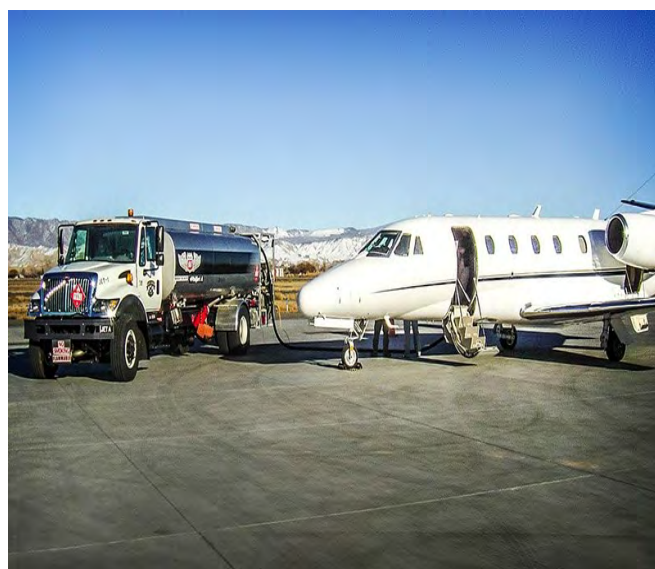


Fuel

Petroleum products are needed for most equipment (including aircraft) to operate. But during the CSZ megathrust earthquake, most of Oregon’s fuel supply (at the CEI Hub in Portland) will slide into the Willamette River, and the pipelines and barges that supply the CEI hub will be damaged and unusable for years. Fuel should be available east of the Cascades, but eastern Oregon airports have limited storage capacity. If the proposed grant funding program described elsewhere in this report is established, increasing fuel storage capacity should be a major focus of the program. And for the airports west of the Cascades, increased storage capacity will help with immediate evacuation needs and help restore airport operations.

Oregon has 97 public use airports, but only **half of them currently have fueling capabilities**, with a total combined storage of 4.1M gallons. About 90% of that fuel is located at the Valley and Coastal airports most likely to be severely impacted by the CSZ earthquake. Eastern and some southern Oregon airports (that are expected to have limited or no damage) have a combined total of 324K gallons of fuel storage.

After the earthquake (and until the refineries in Seattle and the pipelines that bring the petroleum products to western Oregon are repaired) all of Oregon’s petroleum products will have to come from refineries in other states east of the Cascades. (And the Columbia River is not expected to be usable for barged fuel until the downed bridges have been removed.) Eastern Oregon airports (which will serve as staging areas for the relief efforts) will need additional fuel storage to service the rescue and recovery aircraft operations. (Aircraft can tanker fuel, but that reduces the payload available for cargo or passengers.) Appendix B provides details on current storage capacity at the airports in Oregon that have fueling capability.



Pavement

Fixed-wing aircraft (which make up 95% of the US aviation fleet) requires the use of a runway. (Helicopters are rotor wing, and do not.) The size of the largest aircraft able to use an airport is determined by the length, width and strength of the runway. For the runway to be usable, it must be smooth, with cracks, lips or potholes no larger than 3” wide or deep, free of any contaminants, and the markings must be accurate, visible and clean. Cleaning a runway of contaminants (whether debris or snow/ice) is a time-consuming process, and most Oregon airports lack the equipment to mechanically remove it.

Oregon currently does not have any runways that are hardened to withstanding moderate to severe earthquake shaking. At the time of this report, the Portland International Airport (PDX) is in the design phase to harden about half of the southern runway. PDX is adjacent to the Columbia River and sits on highly liquefiable soils, so hardening of this runway represents a very challenging scenario for design engineers. If other Valley airports (such as Salem and Eugene) can secure funding to harden one runway at each airport, it would ensure that the most densely populated portion of Oregon would have a serviceable runway immediately after the event. (Medford would also be a logical choice, but it is a one runway airport, and it would have to be closed for several months to replace its runway with a hardened one, which may be unacceptable to the community.) Additionally, valley and coastal airports should have a hardened helipad or helistop to ensure availability for helicopters.

Runways that have been submerged and those that are suspected of having pockets of liquefaction, will need to have their stability and load-bearing strength assessed prior to reopening by ‘proof-rolling’. Very few airports in Oregon have this capability.



Communications

Communication is key to airports at all times, but will present significant challenges after the earthquake. During Hurricane Katrina, the New Orleans airport became a temporary hospital and transfer station for evacuees. For over a week after the flood, the airport did not have power, but still managed to conduct limited emergency aircraft operations, bringing relief supplies in, and ferrying evacuees out. The control tower used portable hand held radios to communicate with arriving and departing aircraft, and Oregon's airports may have to do the same until power is restored. Having short range Cellular on Wheels and radios with ground control and UNICOM frequencies would allow airport personnel to talk to each other and to aircraft in the immediate vicinity.

For coastal and valley airports that are expected to resume operations within 1-3 months (but may not have electricity restored by then) a more robust communication trailer (with multiple stations) and alternate power source is recommended.

Pilots also rely on visual cues to tell them what pavement is safe to use. An airport must have a way to tell a pilot in the air that a runway is closed and unusable, or for the pilot on the ground, what portions of the taxiways and aprons are unsafe and unusable. Airports use standardized equipment (approved by the FAA), so that a pilot anywhere in the US will see similar visual cues regardless of what airport they are using.

Many of Oregon's airports (especially the general aviation airports) do not have even basic equipment like a runway closure X, or low profile barricades (that are jet blast and prop-wash resistant) that give visual cues to the pilot of unusable areas.



New Orleans during Katrina



The Dalles

Water

The CSZ earthquake is expected to cause significant damage to the drinkable water distribution system in western Oregon. It may take weeks to set up a temporary distribution system, and months to years to restore a permanent one. Water stored at the coastal and valley airports would allow immediate access to drinking water for the people who are helping to restore the airports to an operational state. Water purification systems would allow pond water or harvested rainwater to be used as a safe drinking water source until a temporary or permanent replacement can be established.



Power

Power may takes months to restore. In the meantime, without power, airports will be limited to day-time, visual flight rule (VFR) conditions only. Some airports have emergency generators already on-site (see Appendix A), but those generators are dependent on petroleum fuels to operate, and so will have very limited run time before they are out of fuel. For the airport to be able to use whatever fuel is remaining on the field immediately after the event, they will need a way to pump it out of the tank. Permanent restoration of fuel supplies will be dependent on roadway repair, as fuel will have to be transported via trucks until the refineries, storage and pipeline distribution system can be restored.



Solar powered generators have small capacity, but may provide an alternate renewable power source and may help bridge the gap until power can be restored.



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Chapter 4— Proposed equipment list

Level 1 equipment (**red**) —READY (preparing to return to operational status)

Level 2 equipment (**yellow**) - SET (almost ready to resume airport operations)

Level 3 equipment (**green**) - GO (resume airport operations)

Equipment shown is for illustrative purposes, actual may vary slightly. Not every airport will receive every item. See Chapter 5 for individual airport needs assessment.

Level 1) Ready (preparing to return to operational status)

Portable power generation—diesel

Option A) mobile 30KW Generator, trailer mounted

Option B) mobile 55KW generator, trailer mounted

Option C) mobile 108KW generator, trailer mounted

Portable power generation—solar

Option A) Mobile 8KW off grid solar power station, trailer mounted, battery, no backup generator

Option B) mobile 4.8KW off grid solar power station, trailer mounted, battery plus diesel backup

Option C) mobile,16KW off grid solar power station, trailer mounted, with battery, no backup generator

Airfield pavement sweeper/ debris removal

Option A) Self Contained FOD Sweeper

Option B) front or rear mounted broom attachment

1) with water 2) without water



Level 1) Ready (preparing to return to operational status)

Communications equipment—mobile

Option A) Cellular on wheels—mini

Suitcase, 1/2 mile range

Option B) Cellular on wheels

Trailer mounted, 2 mile range



Uncrewed aerial search/rescue/imaging vehicle, battery operated

Option A) night vision , GPS, 4K RGB camera, thermal imaging, mission and mapping capability

IP55 rating, IP54 rating (controller), external battery (controller), FVP camera, RTX, Laser range finder, optical zoom, docking station, support for multiple payloads



Portable lighting

Option A— LED Light tower, solar, directional, trailer mounted, 64,000LM

Option B—LED Light Tower, diesel, directional, trailer mounted, 188,000LM



Level 1) Ready (preparing to return to operational status)

Shelter—temporary

Option A—equipment shelter

- 1) 20'
- 2) 40'

Option B—Human shelter

- 1) 20'
- 2) 40'
- 3) mass temporary shelter
20'W x 32'L x 10'H



Forklift

Option A –5K# lift, diesel, pneumatic tires, 3-stage mast, 72" fork tines

Option B— same as Option A, except 10K# lift,

Option C—attachment for tractor 4000# lift

Option D – attachment for front end loader—
4000# lift

Option E—pallet jack

Loader—front end

Option A—full size

Option B—compact

Option C—attachment for tractor



Level 2) SET (almost ready to resume airport operations)

Fuel storage—fixed, above ground

- Option A) 10,000 gallons—Jet fuel
- Option B) 12,000 gallons Jet fuel
- Option C) 10,000 gallons AvGas
- Option D) 10,000 gallons Sustainable aviation fuel



Fuel storage—mobile

- Option A) truck 1200 gallons
- Option B) truck 2800 gallons
- Option C) transporter—500 gallons with trailer
 - 1) gasoline or diesel
 - 2) aviation fuel, double wall

Power for fueling operations

- Option A) mobile diesel generator
 - 1) 8KW 2) 13KW 3) 20KW
- Option B— mobile solar generator—12KW with diesel back-up generator



Level 2) SET (almost ready to resume airport operations)**Aircraft traffic control****Option A—low profile barricades**

1) 20 units 2) 50 units

Option B—traffic cones—high reflectivity, with stabilizing base for prop wash/jet blast

1) 100 units 2) 200 units

Option C—runway closure X's—surface mounted**Option D—runway closure X's—elevated, LED light, trailer-mounted**

Level 2) SET (almost ready to resume airport operations)

Message Board –variable message, solar

Option A—mini

- 1) 36 x 72 " 2) 48 x 96"

Option B - full

- 1) 70 x 127" 2) 79 x 133 " 3) 96 x 186"



Communications Units

Option A—self contained trailer, with UNICOM and air traffic control frequencies

- 1) 8 x 35 ' 2) 8 x 42'

Option B—small portable, with UNICOM and air traffic control frequencies, base station plus 4 handhelds



Level 3) GO (resume airport operations)

Water storage

Option A) mobile 500 gallon water trailer and pump

Option B) fixed 2500 gallon tank with support pad

Option C) water purification system , commercial grade, 8K or 16K GPD



Sanitation

Option A) portable, single occupant, trailer mounted

Option B) portable, ADA—accessible

Option C—portable, standard, no wheels



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Chapter 5—Priorities, Investment strategies, implementation

Oregon has invested millions in ensuring our buildings will survive the earthquake. Now we need to ensure our people can survive the aftermath. With critical infrastructure and delivery systems damaged or destroyed in much of western Oregon after the earthquake, and repair times of months to years, Oregon’s airports will become the lifelines until the roads can be repaired and reopened.

For the airports to function in this role, they will need usable runways and specialized equipment to process and distribute the resources arriving from the rest of the country. Other chapters of this report details the types of equipment airports will need. This chapter attempts to prioritize the needs and develop a funding strategy to get there.

Priority 1— Fuel Storage

Without fuel, aircraft (as well as most repair equipment) are unable to operate. Yet the main fuel storage and distribution point for 90% of Oregon’s petroleum fuel products (the CEI Hub in Portland) is expected to be severely damaged in the earthquake. Valley and coastal airports will only have access to whatever fuel they have on site at the time of the event. **Adding additional fuel storage capacity, and making all fuel storage more shake-resilient (for all Oregon airports with current fueling capabilities)** will allow eastern Oregon airports to have more fuel for aircraft involved in the response and recovery efforts. For the valley and coastal airports, the additional fuel may buy them a few days ability for based aircraft to ferry evacuees out immediately after the event. Increasing fuel storage capacity will also help Oregon’s airports support aerial fire suppression efforts during wildfire season.



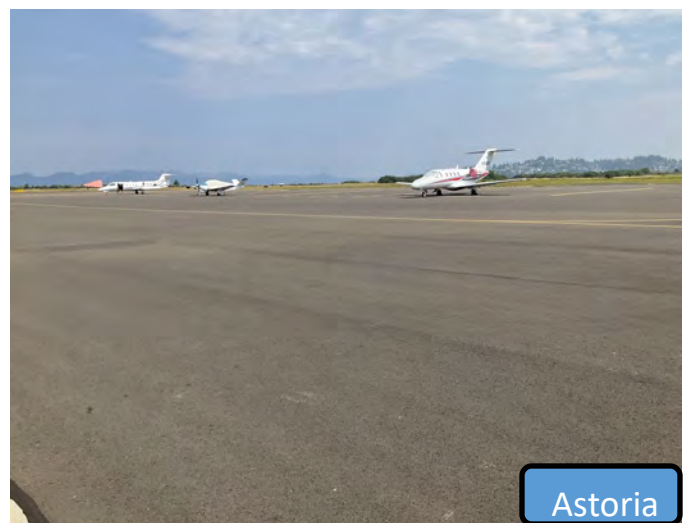
Priority 2— Communications

For airports to resume operations, they must be able to communicate with their workers and with aircraft, even without electricity to the field. The New Orleans airport was without power for a week after Hurricane Katrina, but was able to improvise a system of talking to arriving and departing aircraft via handheld radios and radios in the aircraft. Small base stations, with limited range, can be picked up by aircraft on the airport and in the immediate vicinity. The Air Traffic Control towers (ATC) at Klamath Falls, Redmond (and soon to be, Bend) are expected to remain operational immediately after the event, and may be able to provide some ATC services to aircraft in their vicinity, but local ATC services would have to be provided by personnel on the ground at the arriving airport.

Priority 3— Pavement restoration

For an airport to be operational, it must have usable pavement (a runway, taxiway and apron). For that pavement to be safe for aircraft operations, it must be cleared of any debris or contaminants, be smooth enough not to damage the landing gear, be strong enough for the weight of the aircraft, and have no obstructions that could damage the wings.

Most coastal airports are expected to sustain significant damage to their pavements, either from the tsunami or from landslide/rockslides. For airports whose runways have been submerged or are suspected to have liquefaction pockets, the ability to 'proof-roll' (evaluate the strength and stability of the pavement) is essential for reopening. And once the water recedes at the coastal airports, the runways may be usable once cleaned. For all airports, the ability to clean the runway of contaminants and/or debris is critical to reopening the pavement. **Hardening of at least four western Oregon runways (to be immediately operational after the event) and construction of hardened helipads should be a long-term investment goal for Oregon.**



Priority 4—Water and Sanitation

Water is essential for life. (Humans can survive for about three days without it.) But the water distribution system in western Oregon is expected to sustain major damage and takes months to years to restore. Having water stored at the coastal and valley airports would provide sufficient drinking water for personnel working to reopen the airport. Having a water purification system on airport will allow pond or rain run-off to be usable as safe drinking water.

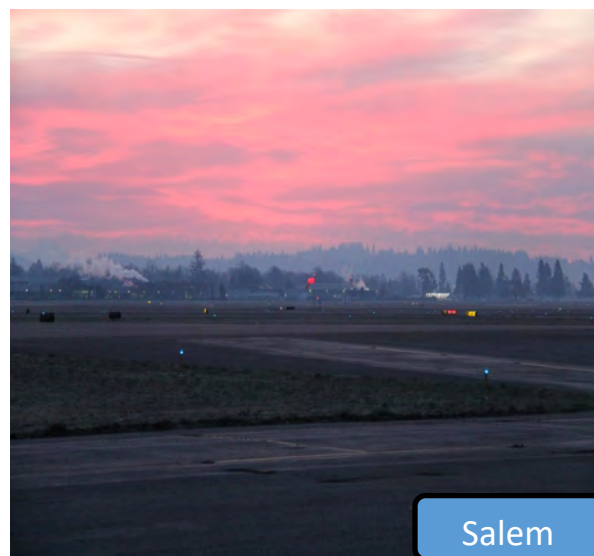
The sanitary sewer system is also expected to sustain major damage, and take months to years to repair. Lack of basic sanitation facilities can spread contaminants into the ground water supply. Having basic sanitation facilities at the airport for the personnel working towards restoration of operations and during the recovery efforts will reduce the risk of contamination.

Priority 5—Lighting

For an airport to be used during low visibility or after dark, it must have runway and taxiway edge lights, and ramp lighting. For the purpose of this report, the ODAV assumed that the airports on the coast and in the valley would not have electricity or functioning lights for weeks or months after the earthquake. Therefore aircraft operations would be limited to daytime VFR operations only. For the airports east of the Cascades (who will be serving as staging areas for the relief efforts from the rest of the country) additional ramp lighting may allow for more areas of the airport to be used for loading and unloading of supplies during periods of darkness.



Water salute for 1st flight, and return of commercial air service to Salem, 10/5/23



Salem



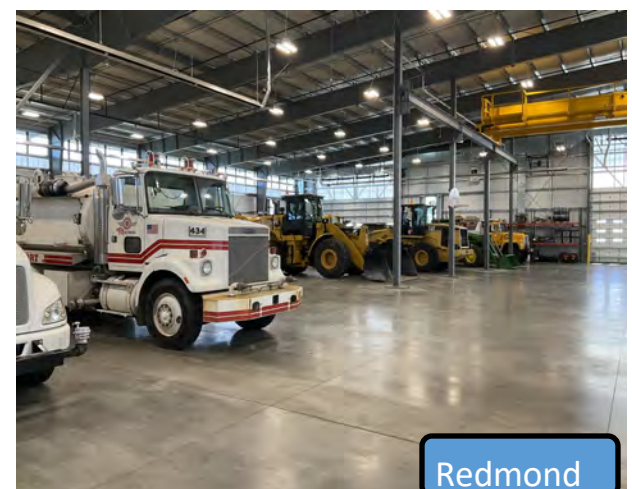
North Bend

Investment strategies

Most Oregon airports are locally owned, by a city, county or Port. About half of Oregon's airports are eligible for federal transportation grant funds. (The FAA funding is mostly limited to capital improvement projects, a limited amount of equipment (such as snow removal and fire trucks at the commercial service airports), and planning projects). Resiliency projects are rarely eligible for FAA funding. State funding for airports is even more limited. While all public use airports in Oregon may apply for the Department of Aviation's small grant program, the maximum amount awarded has generally been \$150,000, which is mostly used for matching share on federal grants (although a few resiliency and economic development projects have been funded). But the ODAV grant program is dependent on a tax on aviation fuels (and generally awards around \$2M a year), which is insufficient for capital improvement projects, much less resiliency projects.

If Oregon's airports are to be the lifeline after the earthquake, an alternate funding source must be found. The Legislature provides general funds for the Department of Emergency Management's SPIRE grant program (to provide equipment to local first responder agencies), and has provided millions to local governments to retrofit community buildings to withstand the earthquake, so assisting Oregon's airports to help our people survive the aftermath would be a reasonable use of state general fund dollars.

General fund dollars are limited, and competition for those funds is intense. But the survival of 3.7M Oregonians in western Oregon may depend on our willingness to invest in the airports. **We have invested millions in ensuring our buildings will survive the earthquake. Now we need to ensure our people can survive the aftermath, by investing in airport infrastructure and equipment.**

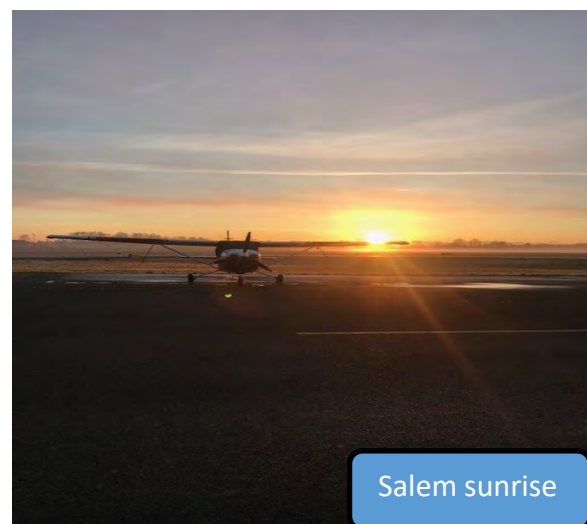


Implementation

If the Legislature views the investment in airport resiliency as an appropriate use of general funds, it can create a grant program similar to OEM's SPIRE (a grant program providing equipment to first responder agencies). The proposed name of this grant program is the **Statewide Airport Resiliency Assistance (SARA)** grant program, and it is suggested that the Oregon Department of Aviation or Oregon Department of Emergency Management would administer the program, in a manner similar to ODAV's Aviation System Action Program (ASAP) grant program or OEM's SPIRE grant program.

The Oregon Department of Aviation, with assistance from OEM, would develop the grant application process, subject to review and approval of the State Aviation Board. Applications would be reviewed and ranked by a committee comprised of representatives of emergency preparedness organizations (including OEM, and the State Resiliency Officer) Grant awards would also be subject to approval of the State Aviation Board. ODAV would be allowed to use up to 5% of the total amount allocated by the Legislature for administrative costs associated with the program. ODAV would report annually to the Legislature on who received the awards, and for what equipment.

The grant program would be open to all publicly-owned public-use airports in Oregon (or owned by an Oregon municipality). Depending on the amount of funding provided and number of applications, airports may be limited to no more than three grants per year.



Salem sunrise



Medford

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Chapter 6 Public-Private Partnerships

Following the Cascadia Subduction Zone megathrust earthquake, resources are expected to flow into the Pacific Northwest to assist in the response and recovery. While much of the effort will be led by the federal government, the corporate and private sector response may be equal or greater than the federal one. Corporations with physical assets in the affected areas will want to assess their facilities and assist their impacted employees. Good Samaritan groups and aviation affiliated organizations are expected to assist in the response as well. The aviation community is relatively small and close knit, and as has been repeatedly demonstrated in past disasters, have stepped up to supplement the government response.

Aircraft can perform aerial surveillance, disaster supply delivery, precision air drops, transportation of uninjured evacuees, medical transport, and other humanitarian activities.

Oregon is home to almost 11,000 pilots and almost 6,000 registered aircraft, and 97 public use airports.

Oregon has a strong network of aviation related businesses and pilot associations, such as the Oregon Pilots Association (which has 2200 members) and the Oregon chapters of the Experimental Aircraft Association (which has over 250,000 members nationwide). The Aircraft Owners and Pilots Association is a nationwide association with 350,000 members. These organizations have provided assistance in other natural disasters around the country, and would likely offer to assist when Oregon needs it.

ODAV is considering entering into Memorandums of Agreement with these organizations for assistance following a natural disaster.



Oregon Pilots Association (OPA)

OPA's eight chapters represent Oregon pilots, and have been involved in emergency preparedness for years. They have participated in transporting medical supplies to frontline wildland firefighters, and other disaster relief efforts. They have performed aerial surveillance and precision air drops.

Aircraft Owners and Pilots Association (AOPA)

As the nations largest organization representing aircraft owners and pilots, AOPA has access to over 350,000 pilots and aircraft owners worldwide. AOPA has a staff member assigned exclusively to the Pacific Northwest, based out of Washington state.

Experimental Aircraft Association (EAA)

With almost 20 chapter across Oregon, EAA is one of the most active of the aviation associations in Oregon. As part of a national association with over 250,000 members nationwide, EAA members have the pilots and aircraft to fly into small airports and airports with short runways.

Ninety-nines (99's)

The 99's are an international organization representing female pilots. With four chapters in Oregon (Oregon Pines, Crater Lake, Columbia Cascade, and Central Oregon High Desert), they have members in most communities in Oregon.

AUVSI—Cascades Chapter

AUVSI is a trade association representing uncrewed aerial systems manufacturers and operators in the Northwest. It's members operate a wide range of uncrewed aerial systems (aka drones) ranging in size from small recreational vehicles to Department of Defense surveillance and payload vehicles.



National Air Transportation Association (NATA)

NATA is a national association representing aviation service businesses including fixed base operators, charter providers, aircraft management companies, flight training and maintenance and repair organizations.

National Business Aviation Association (NBAA)

NBAA is a national association representing businesses that own and operate general aviation aircraft.

Helicopter Association International (HAI)

HAI is an international organization providing support and services to the helicopter community, with headquarters in Alexandria VA.

Civil Air Patrol (CAP)

The CAP is a volunteer organization that is a partner and civilian auxiliary of the US Air Force. It's 64,000 members provides emergency service missions including search and rescue, aerial surveillance.

Oregon Airport Managers Association (OAMA)

OAMA represents Oregon's public use airport managers through legislative efforts, conferences, and scholarship programs.



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Chapter 7—Proposed Legislative language for Grant program

HB 3058 requires ODAV to suggest legislative language for implementing the recommendations contained in this report. The following is proposed language for the Statewide Airport Resiliency Assistance (SARA) grant program, modeled after HB 2687 (2017) which created the Oregon Department of Emergency Management SPIRE grant program.

Relating to emergency preparedness; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. (1) As used in this section:

- (a) “Emergency” has the meaning given that term in ORS 401.025.
 - (b) “Maintain” means to repair, perform upkeep on and otherwise keep in good working condition.
 - (c) “Preparedness equipment” means equipment, vehicles or other personal property that: (A) May be used to decrease the risk to life and property resulting from an emergency; and (B) Qualifies as a capital asset eligible for financing with tax-exempt bonds.
 - (d) “Qualified applicant” means a public-use airport in the State of Oregon (or which is owned by an Oregon municipality).
 - (e) “Recipient” means an entity that applies for and receives preparedness equipment, or funds to purchase preparedness equipment, under the grant program described in subsection (3) of this section.
 - (f) “Tax-exempt bond” means a bond, as defined in ORS 286A.001, the receipt of interest on which is excluded from gross income under the Internal Revenue Code or that is eligible for a federal interest subsidy payment or other tax-advantaged status.
- (2)(a) Before June 30, 2024, the Oregon Department of Aviation shall develop a list of preparedness equipment that is needed throughout this state to address deficiencies in the ability of public-use airports to respond to local and regional emergencies.
- (b) In developing the list, ODAV shall consult and coordinate with the Oregon Department of Emergency Management and with the Oregon Airport Managers Association.
- (c) ODAV shall assign a priority level to each type of preparedness equipment on the list, taking into consideration, without limitation, the types of emergency that are most likely to occur in different regions of this state and the types of preparedness equipment that offer the highest ratio of utility to cost. ODAV shall periodically update and revise the list.

The Department of Aviation shall develop and administer a grant program to distribute preparedness equipment, or funds to purchase preparedness equipment, to recipients throughout this state. Pursuant to the grant program:

- a) Qualified applicants may request preparedness equipment that is identified on the list described in subsection (2) of this section. Applicants must demonstrate a need for the specific preparedness equipment requested, the ability to maintain the preparedness equipment and the ability to use the preparedness equipment for its intended purpose.
- b) ODAV shall identify which requests from applicants, if fulfilled, will maximize the airport’s ability to respond to an emergency, taking into account considerations that include but are not limited to:
 - (A) The level of priority assigned to the requested preparedness equipment type pursuant to subsection (2) of this section;
 - (B) The level of need for the requested preparedness equipment as demonstrated by the applicant;
 - (C) The ability to use and maintain the preparedness equipment as demonstrated by the applicant;
 - D) The types of emergency most likely to occur in the region where the applicant is located; and
 - (E) Whether the applicant has an alternative means of acquiring the requested preparedness equipment.
- c) The ODAV shall issue grants to applicants identified under paragraph (b) of this subsection after entering into grant agreements with the applicants as provided in paragraph (e) of this subsection. The ODAV may either purchase the requested preparedness equipment for distribution to a recipient or disburse funds to the recipient for the purchase of the requested preparedness equipment.
- (d) The Public Contracting Code does not apply to the acquisition of preparedness equipment by the office or by a recipient pursuant to this section. When acquiring preparedness equipment pursuant to this section, the office and recipients shall use procurement methods that are impartial and transparent to the greatest extent feasible and are designed to maximize value to the State of Oregon.
- (e) ODAV may not disburse preparedness equipment or funds under this section unless ODAV and the intended recipient first enter into a grant agreement. The grant agreement:
 - (A) Shall require the recipient to maintain the preparedness equipment.
 - (B) Shall provide that, if a recipient fails to adequately maintain preparedness equipment, the recipient must relinquish possession of the preparedness equipment or reimburse the ODAV for the cost of the preparedness equipment.
 - (C) Shall specify that the ODAV may conduct periodic inspections of the preparedness equipment as described in paragraph (f) of this subsection.
 - (D) Shall specify that preparedness equipment distributed to the recipient remains the property of the ODAV until it is fully depreciated under governmental accounting principles, after which the ODAV may offer the preparedness equipment for sale to the recipient at its fair market value at the time of sale.

E) May permit the recipient to use the preparedness equipment for any purpose, governmental or otherwise, that is permissible for assets financed with tax-exempt bonds, including nonemergency purposes.

f) Shall require the recipient to take action or refrain from action as necessary to maintain federal tax benefits related to any tax-exempt bonds that are used to fund the grant and to indemnify the State of Oregon for any costs, expenses or liability due to loss of such federal tax benefits caused by action or inaction of the recipient.

g) The ODAV shall conduct periodic inspections of preparedness equipment distributed or purchased through the grant program to ensure that recipients are adequately maintaining the preparedness equipment. If ODAV finds that any preparedness equipment is not adequately maintained, the office may take possession of the preparedness equipment or require the recipient to reimburse the office for the cost of the preparedness equipment.

h) ODAV may transfer between recipients, dispose of or otherwise manage the preparedness equipment as it determines is in the best interests of meeting the emergency preparedness needs of the State of Oregon. If ODAV disposes of preparedness equipment for any reason, including sale to a recipient as provided in paragraph (e)(D) of this subsection, the office shall deposit any moneys it receives from the disposal in the Statewide Airport Resiliency Assistance (SARA) Grant Fund established under section 2 of this 2024 Act.

4) On or before December 31 of each year, the ODAV shall submit a report to the Legislative Assembly that describes the administration and effectiveness of the grant program established under this section and the current prioritized list of preparedness equipment types.

(5) ODAV shall adopt rules to administer and implement the provisions of this section.

SECTION 2. The Statewide Airport Resiliency Assistance (SARA) Grant Fund is established in the State Treasury, separate and distinct from the General Fund. Interest earned by the SARA Grant Fund must be credited to the fund. The SARA Grant Fund consists of moneys deposited in the fund under section 1 of this 2024 Act and may include moneys appropriated, allocated, deposited or transferred to the fund by the Legislative Assembly or otherwise and interest earned on moneys in the fund. The moneys in the fund are continuously appropriated to the Oregon Department of Aviation for the purposes specified in section 1 of this 2024 Act.

Section 3. ODAV may use up to 5% of any funds appropriated to the SARA Grant program for administrative expenses related to this program.

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Appendix A - Current inventory of airports

Oregon has 97 public use airports, with most of them located in the more densely populated areas of western Oregon. There are 17 public use airports along the Coast, 15 in the Willamette Valley, 10 in the Portland metro area, six in the Gorge, seven in central Oregon, 21 in southern Oregon and 20 in eastern Oregon.

Most public use airports are owned by local governments, either a city (31), county (9) or port (10). 28 are owned by the State, two are federal and one is by a Special District. 15 are privately owned, but public use.

The size of aircraft an airport can accept is dependent on the runway length, strength, and width. For example, a Boeing 737 (which has a wingspan of 93-118’ depending on model) needs a 100’ wide runway. A military C-130 (which has a wingspan of 132’) prefers a 150’ wide runway but can operate on a 100’ runway in an emergency. Some smaller jets such as the Cessna Citations (depending on model) can operate on a 75’ wide runway. And smaller two-to-four seat general aviation aircraft like the Cessna 206 can operate on almost any runway.



Klamath Falls

Public use airports by geographic location

Coast (17) – Astoria, Bandon, Brookings, Florence, Siletz Bay (Gleneden Beach), Gold Beach, Lakeside, Nehalem Bay (Manzanita), Newport, North Bend, Pacific City, Powers, Seaside, Cape Blanco, Tillamook, Toledo, Wakonda Beach

Valley (15) – Albany, Corvallis, Cottage Grove, Eugene, Gates, Hubbard, Independence, Lebanon, McKenzie Bridge, McMinnville, Chehalem, Newberg, Oakridge, Salem, Santiam Junction

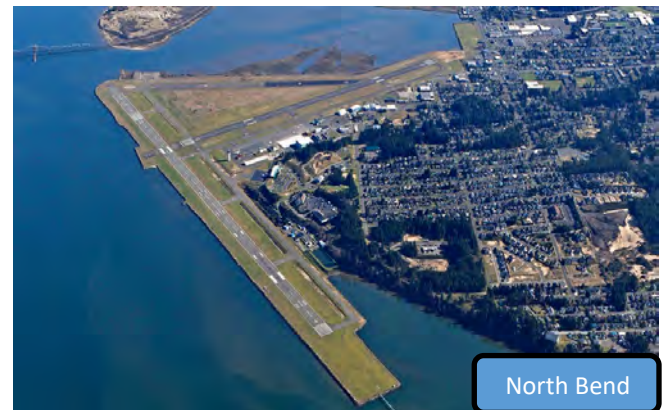
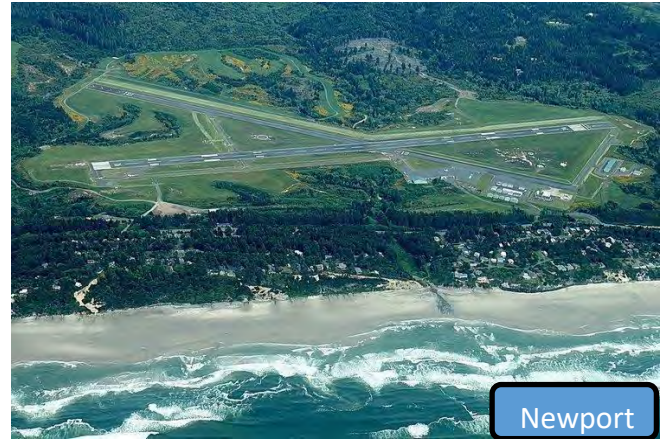
Portland (10) – Skyport, Twin Oaks, Portland Heli-pad, PDX, Hillsboro, Troutdale, Mulino, Scappoose, Vernonia, Aurora

Gorge (6) – Cascade Locks, Valley View, Hood River, Country Squire, Sandy River, The Dalles

Central (7) – Bend, Lake Billy Chinook, Madras, Prineville, Redmond, Sisters, Sunriver

Southern (21) – Alkali Lake, Ashland, Beaver Marsh, Illinois Valley, Chiloquin, Christmas Valley, Toketee, Crescent Lake, Creswell, Grants Pass, Klamath Falls, Lakeview, Malin, Medford, Myrtle Creek, Paisley, Pinehurst, Prospect, Roseburg Felts, Roseburg Regional, Silver Lake

Eastern (20) – Arlington, Baker City, Boardman, Burns, Condon, Enterprise, Hermiston, Memaloose, John Day, Joseph, La Grande, Lexington, McDermitt, Monument, Ontario, Owyhee, Pendleton, Rome, Vale, Wasco



Public use airports by runway width

Airports with a **150' wide** runway (13 paved, 3 gravel)
Coast - North Bend (2), Cape Blanco
Valley—Corvallis, Eugene (2), Salem, Santiam Junction
Portland—PDX (3), Hillsboro, Troutdale
Gorge—none
Central—Redmond
Southern—Alkali Lake (gravel) Klamath Falls, Medford
Eastern—Baker City, Pendleton, Rome (gravel)

Airports with a **100' wide** runway (19 paved, 1 turf)
Coast – Astoria, Lakeside (turf), Newport
Valley – Aurora, McMinnville
Portland area – Mulino, Scappoose
Gorge – Sandy River, The Dalles
Central – Redmond
Southern – Klamath Falls, Lakeview, Roseburg-Felts,
Roseburg - Regional
Eastern – Baker City, Boardman, LaGrande, Ontario,
Pendleton

Airports with a **75' wide** runway (17 paved)
Coast – Gold Beach, Newport, Tillamook
Valley – Albany, Corvallis
Portland area – Hillsboro
Gorge – Hood River
Central – Bend, Madras, Prineville
Southern – Ashland, Grants Pass
Eastern – Burns, Hermiston, Lexington

Airports with **60' wide** runway (23 paved, 2 turf, 1 dirt)
Coast - Bandon, Brookings, Florence, Siletz Bay, Powers
(turf)
Valley – Cottage Grove, Independence, Lebanon
Portland area - Hillsboro
Gorge - none
Central - Sisters
Southern – Beaver Marsh (dirt), Illinois Valley, Chiloquin,
Christmas Valley, Toketee (turf), Creswell, Myrtle Creek,
Paisley
Eastern – Burns, Condon, John Day, Joseph, LaGrande,
Wasco

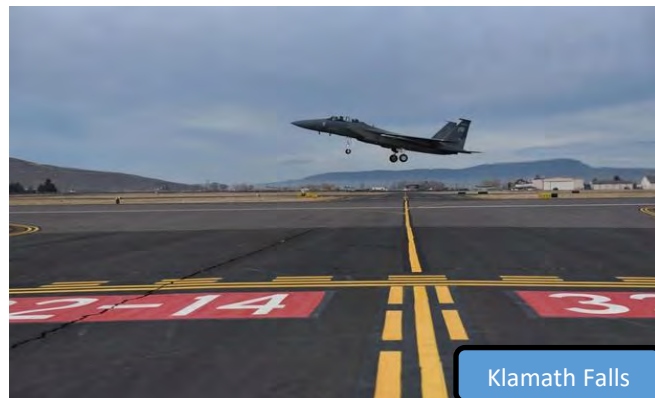


Airports with a **50’ wide** runway

Coast – Nehalem Bay (Manzanita), Seaside
Valley – Gates (turf), Hubbard (45’), Newberg
Portland area – Twin Oaks (48’)
Gorge - none
Central – Madras
Southern – Prospect, Silver Lake (turf)
Eastern – Arlington (turf), Enterprise

Airports with **odd runway widths**

Coast – Pacific City (30’), Toledo (40’), Wakonda Beach (30’ turf)
Valley – McKenzie Bridge (90’, turf), Chehalem (40’), Oakridge (47’)
Portland area – Skyport (45’, turf), Portland Helipad (80x80), Vernonia (45’, turf)
Gorge – Cascade Locks (30’), Valley View (32’), Country Squire (32’)
Central – Lake Billy Chinook (32’), Prineville (40’)
Southern – Crescent Lake (30’), Malin (30’) Pinehurst(30’)
Eastern – Memaloose (25’, turf), Monument (29’), Owyhee (30’, dirt), Vale (40’, gravel)



Public use airports by **runway length**

Runways **10,000’ or longer**

Portland International (11,000), Klamath Fall (10,301)

Runways **8000’ – 10,000’** length

Portland International (9825), Eugene (8009), Medford (8800)

Runways **6000-’ 8000’** length

Redmond (7038, 7006), LaGrande (6261), Pendleton (6301), Rome (6000), Portland Int’l (6000), Hillsboro (6600), Alkali Lake (6100), Eugene (6000)

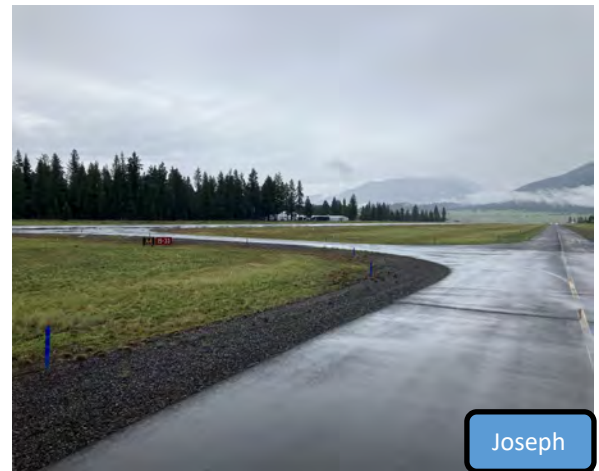
Runways **5000-’6000’** length

Bend (5200), Madras (5089), Prineville (5751), Sunriver (5461), Astoria (5794), Newport (5398), North Bend (5980), Cape Blanco (5100), Tillamook (5001), Arlington (5000)

Public use airports by runway length

Runways **5000-6000'** length (continued)

Baker City (5035), Burns (5100), John Day (5220), Joseph (5200), McDermitt (5900), Ontario (5006), Pendleton (5582), The Dalles (5097), Troutdale (5399), Scappoose (5100), Christmas Valley (5200), Toketee (5350), Klamath Falls (5258), Lakeview (5318), Roseburg Regional (5003), Aurora (5003), Corvallis (5900), McMinnville (5420), Salem (5146, 5811)



Runways **3000' - 5000'** length

Prineville (4054), Sisters (3560), Astoria (4467), Bandon (3601), Florence (3000), Gleneden Beach (3297), Gold Beach (3200), Newport (3001), North Bend (4470), Baker City (3670, 4359), Boardman (4200), Burns (4600), Condon (3500), Hermiston (4500), John Day (4471), La Grande, (3399), Lexington (4156), Wasco (3450), Estacada (3780), Hood River (3040), Sandy (3095), The Dalles (4647), Hillsboro (3600, 3821), Mulino (3425), Ashland (3603), Beaver Marsh (4500), Illinois Valley (4807), Chiloquin (3749), Crescent Lake (3900), Creswell (3102), Grants Pass (4001), Paisley (4300), Prospect (4000), Silver Lake (3000), Corvallis (3100), Cottage Grove (3188), Independence (3142), McMinnville (4340), Oakridge (3610)



Runways **under 3000'** length

Lake Billy Chinook (2500), Madras (2701), Brookings (2901), Lakeside (2150), Manzanita (2350), Pacific City (1860), Powers (2500), Seaside (2211), Tillamook (2911), Toledo (1750), Wakonda Beach (2000), Enterprise (2850), Memaloose (1600), Monument (2104), Owyhee (1840), Vale (2100), Sandy River (2115), Skyport (2006), Twin Oaks (2465), Portland helipad (80), Vernonia (2000), Malin (2800), Myrtle Creek (2600), Pinehurst (2800), Roseburg – Felts (2300), Gates (1940), Hubbard (2956), Lebanon (2747), McKenzie Bridge (2600), Chehalem (2285), Sportsman (2755), Santiam Junction (2800)



Public use airports by runway strength (per thousand pounds of aircraft weight)

Coast	Single Wheel	Dual Wheel	Dual tandem
Astoria	60	76	119
Bandon	12		
Brookings	11		
Florence	12.5		
Gleneden	11		
Gold Beach	12.5		
Lakeside	no data available		
Manzanita	no data available		
Newport (Rwy 2-20)	33	50	84
(rwy 16-34)	75	120	170
North Bend (rwy 5-23)	120	215	800
(rwy 13-31)	120	190	305
Pacific City	7		
Powers	no data available		
Seaside	12		
Cape Blanco	115	185	340
Tillamook (rwy 1-19)	40	46	67
(rwy 13-31)	60	75	125
Toledo	no data available		
Wakonda Beach	no data available		

Valley	Single wheel	dual wheel	dual tandem
Albany	30	43	71
Aurora	30	45	
Corvallis (rwy 10-28)	51	65	100
rwy 17-35)	35	73	100
Cottage Grove	15		
Eugene (rwy 16L-34R)	120	211	342
rwy 16R-34L)	120	250	550
Gates	no data available		
Hubbard	no data available		
Independence	12.5		
Lebanon	no data available		
McKenzie Bridge	no data available		
McMinnville (rwy 4-22)	40	50	80
(rwy 17-35	30		
Newburg (Chehalem)	no data available		
Newberg (Sportsman)	30		
Oakridge	no data available		
Salem (rwy 16-34)	39.5	52	

	Single Wheel	dual wheel	dual tandem
Cornelius (Skyport)	no data available		
Hillsboro (Twin Oaks)	no data available		
PDX (rwy 3-21)	120	250	380
(rwy 10L-28R)	200	200	400
(rwy 10R-20L)	200	200	360
Hillsboro (rwy 2-20)	54.5	74	139
(rwy 13L-31R)	28		
(rwy 13R-31L)	50	73	110
Troutdale	19	25	
Mulino	no data available		
Scappoose	30	50	90
Vernonia	no data available		

	Single wheel	dual wheel	dual tandem
Gorge			
Cascade Locks	4		
Estacada	no data available		
Hood River	23		
Sandy	7		
Sandy River	no data available		
The Dalles (rwy 7-25)	30	30	
(rwy 13-30)	30	30	

Central	Single wheel	dual wheel	dual tandem
Bend	30		
Lake Billy Chinook	no data available		
Madras	16		
Prineville	30		
Redmond (rwy 11-29)	109	178	
(Rwy 5-23)	120	216	399
Sisters	4		
Sunriver	30		



Southern	Single wheel	dual wheel	dual tandem
Alkali Lake	no data available		
Ashland	15		
Beaver Marsh	no data available		
Illinois Valley	20	30	
Chiloquin	10		
Christmas Valley	12		
Toketee	no data available		
Crescent Lake	no data available		
Creswell	12		
Grants Pass	19		
Klamath Falls (rwy 7-25)	53	77	
(rwy 14-22)	107	175	315
Lakeview	74	86	
Malin	no data available		
Medford	75	200	400
Myrtle Creek	12		
Paisley	no data available		
Pinehurst	no data available		
Prospect	no data available		
Roseburg – Felts	no data available		
Roseburg- Reg'l	42	54	88
Silver Lake	no data available		
Eastern	single wheel	dual wheel	dual tandem
Arlington	no data available		
Baker City (rwy 8-26)	30		
(rwy 13-31)	50	65	
Boardman	30		
Burns	30		
Condon	12		
Enterprise	7		
Hermiston	22		
Memaloose (Imnaha)	no data available		
John Day (rwy 17-35)	12.5		
(rwy 9-27)	12.5		
Joseph	12.5		
La Grande	65	90	130
Lexington	12.5		
McDermitt	12.5		
Monument	no data available		
Ontario	30	60	
Owyhee	no data available		
Pendleton (rwy 8-26)	115	132	210
(rwy 11-29)	70	120	122
Rome	no data available		
Vale	no data available		
Wasco	12.5		

Airports with a control tower (11 current)

Coast – North Bend
 Valley – Aurora, Salem, Eugene
 Portland area – PDX, Hillsboro, Troutdale
 Gorge - none
 Central – Redmond, Bend (opening in 2025)
 Southern – Klamath Falls, Medford
 Eastern - Pendleton

Airports with airline service (7)

Coast – North Bend
 Valley - Eugene, Salem
 Portland – PDX
 Gorge – none
 Central – Redmond
 Southern – Medford
 Eastern – Pendleton



Fuel - Airports with both Jet A and AvGas /100LL (41)

Coast – Astoria, Bandon, Brookings, Florence, Gold Beach, Newport, North Bend, Tillamook
 Valley – Albany, Aurora, Corvallis, Eugene, Independence , McMinnville, Chehalem, Sportsman, Salem
 Portland – PDX, Hillsboro, Troutdale, Scappoose
 Gorge – The Dalles
 Central – Bend, Madras, Prineville, Redmond, Sunriver
 Southern – Ashland, Creswell, Grant Pass, Klamath Falls, Lakeview, Medford, Roseburg Regional
 Eastern – Baker City, Burns, Hermiston, John Day, La Grande, Ontario, Pendleton

Airports with AvGas/100LL only (10)

Coast – none	Central—Sisters
Valley – Cottage Grove	Southern—Illinois Valley, Malin
Portland – Twin Oaks, Mulino	Eastern—Enterprise, Joseph, Lexington
Gorge – Hood River	

Airports that do not have fuel (42)

Coast – Gleneden Beach, Lakeside, Manzanita, Pacific City, Powers, Seaside, Cape Blanco, Toledo, Wakonda Beach, **Valley** – Gates, McKenzie Bridge, Oakridge, Santiam Junction, **Portland** – Skyport, Portland Helipad, Vernonia, **Gorge** – Cascade Locks, Estacada, Sandy, Sandy River, **Central** – Lake Billy Chinook, **Southern** – Alkali Lake, Beaver Marsh, Chiloquin, Christmas Valley, Toketee, Crescent Lake , Myrtle Creek, Paisley, Pinehurst, Prospect, Roseburg -Felts, Silver Lake, **Eastern** – Arlington, Boardman, Condon, Memaloose, McDermitt, Owyhee, Rome, Vale, Wasco

Airport current capability

Coast

Astoria (owner – Port of Astoria) elevation 14' MSL,
FAA ID AST

Runways (2), 5794' x 100, 4467' x 100', asphalt

Runway lights – yes, pilot- controlled

Approaches – ILS, GPS

Tower - none

Fuel – Jet A, 100LL

FBO – yes (Port of Astoria) (503) 861-1222

Repairs – major, minor

Fuel storage capacity – 5,000 truck, 35,000 tank

Tsunami Inundation Zone - yes



Bandon (owner – Oregon Department of Aviation)
elevation 106' MSL, FAA ID: S05

Runway 3601 x 60, asphalt

Runway lights- yes, pilot controlled

Approaches - visual

Tower - no

Fuel – Jet A, 100LL

FBO – yes (Bandon Aviation) (541)347-2022

Repairs – major, minor

Fuel storage capacity - 8000 tank

Tsunami inundation zone - no



Brookings (owner City of Brookings) elevation 462'
MSL, FAA ID: BOK

Runway 2901 x 60, asphalt

Runway lights - yes, pilot controlled

Approaches - visual

Tower - no

Fuel – Jet A, 100LL

FBO – yes (Brookings Flying Club) (541)412-5103

Repairs - none

Fuel storage capacity – tank 12,000

Tsunami inundation zone - no



Florence (owner City of Florence) elevation 51'

MSL, FAA ID: 6S2

Runway 3000 x 60, asphalt

Runway lights – yes, pilot controlled

Approaches - visual

Tower - no

Fuel – Jet A, 100LL

FBO – City, (541)997-8069

Repairs - none

Fuel storage capacity – Jet A 4000, 100LL 6000 tank

Tsunami Inundation Zone –no



Gleneden Beach (Siletz Bay) (owner OR Department of Aviation) elevation 60' MSL, FAA ID: S45

Runway 3300 x 60, asphalt

Runway lights – yes, pilot controlled

Approaches - visual

Tower - none

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity – none

Tsunami Inundation Zone—no, but access road is in the TIZ



Gold Beach (owner Port of Gold Beach) elevation 21' MSL, FAA ID: 4S1

Runway 3200 x 75, asphalt

Runway lights – yes, pilot controlled

Approaches - visual

Tower - none

Fuel – Jet A, 100LL

FBO – Port of Gold Beach

Repairs - minor

Fuel storage capacity – n/a



Lakeside (owner City of Lakeside) elevation 20'

MSL, FAA ID: 9S3

Runway 2150 x 100, turf

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity – none

Tsunami Inundation Zone - yes



Manzanita (Nehalem Bay) (owner OR Dept. of Aviation) elevation 30' MSL, FAA ID: 3S7

Runway 2314 x 50, asphalt

Runway lights -none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none

Tsunami Inundation Zone – yes



Newport (owner City of Newport) elevation 160'

MSL, FAA ID: ONP

Runway 5398 x 100, 3001 x 75 asphalt

Runway lights - yes

Approaches – GPS, ILS, RNAV

Tower - no

Fuel – Jet A, 100LL

FBO – yes, City of Newport (541)867-7422

Repairs - no

Fuel storage capacity Jet A truck 3K, tank 12K,
AvGas truck 750, tank 9K

Tsunami inundation Zone – no but immediately adjacent to fence line



North Bend (owner Coos County) elevation 17'

MSL FAA ID: OTH

Runway 5980 x 150, 4470 x 150, asphalt

Runway lights - yes

Approaches – GPS< ILS< RNAV

Tower - yes

Fuel – Jet A, 100LL

FBO – Coos Aviation (541)756-5181

Repairs – major, minor

Fuel storage capacity – Jet A 81,000 100LL n/a

Tsunami Inundation Zone - yes



Pacific City (owner OR Department of Aviation)

elevation 10' MSL FAA ID: PFC

Runway 1860 x 30, asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none

Tsunami Inundation Zone – yes



Powers (owner Port of Coquille River) elevation

326' MSL FAA ID:6S6

Runway 2500 x 60, turf

Runway lights - none

Approaches - visual

Tower - no

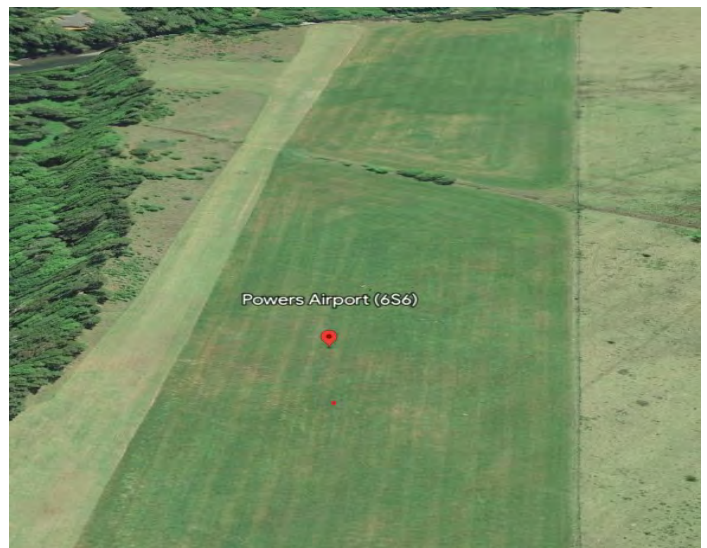
Fuel - none

FBO - none

Repairs -none

Fuel storage capacity - none

Tsunami Inundation Zone – no



Seaside (owner City of Seaside) elevation 14' MSL

FAA ID: 56S

Runway 2211 x 50, asphalt

Runway lights – yes, pilot controlled

Approaches –visual

Tower - no

Fuel -none

FBO - none

Repairs - none

Fuel storage capacity - none

Tsunami Inundation Zone – yes



Cape Blanco (owner OR Department of Aviation)

elevation 214' MSL FAA ID: 5S6

Runway 5100 x 150m, asphalt

Runway lights - none

Approaches - visual

Tower -no

Fuel -none

FBO - none

Repairs - repairs

Fuel storage capacity – none

Tsunami Inundation Zone - no



Tillamook (owner Port of Tillamook Bay) eleva-

tion 36' MSL FAA ID: TMK

Runway 2911 x 75, 5001 x 75, asphalt

Runway lights – yes, pilot controlled

Approaches – GPS, RNAV

Tower - no

Fuel – Jet A, 100LL

FBO – Tillamook Airport (503) 842-7152

Repairs - none

Fuel storage capacity - Jet A 12,500 tank, Avgas
12,500 tank

Tsunami Inundation Zone – no, but immediately
adjacent to fence line



Toledo (owner OR Department of Aviation)

elevation 12' MSL FAA ID: 5S4

Runway 1700 x 40, asphalt

Runway lights -none

Approaches –visual

Tower- no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity – none

Tsunami Inundation Zone - yes



Wakonda Beach (owner OR Department of Aviation)

elevation 41' MSL FAA ID: R33

Runway 1998 x 30, turf

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Valley

Albany (owner City of Albany) elevation 226

FAA ID: S12

Runway 3004 x 75, asphalt

Runway lights yes, PCL

Approaches – GPS, VOR

Tower - no

Fuel – 100LL, Jet A

FBO Infinite Air Center (541) 730-3345

Repairs - minor

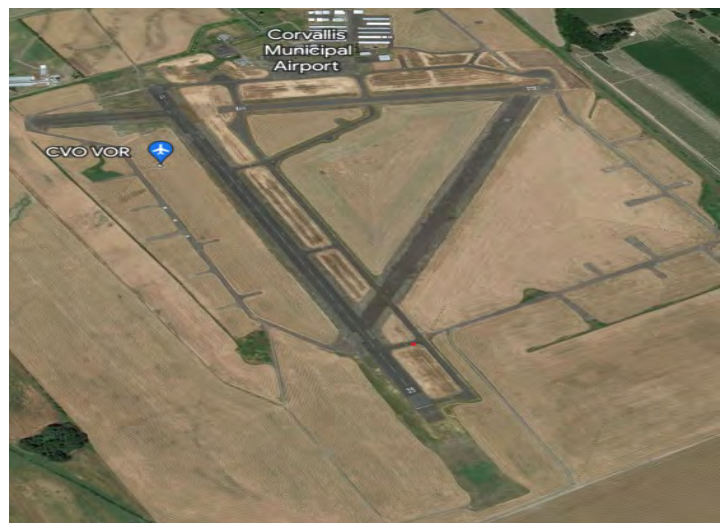
Fuel storage capacity – 2,000 Jet, 12K Avgas



Aurora (owner OR Dept of Aviation) elevation
199' MSL FAA ID: UAO
Runway 5003 x 100, asphalt
Runway lights – yes, PCL
Approaches – GPS, RNAV, LOC
Tower - yes
Fuel – 100LL, Jet A
FBO - multiple
Repairs - major
Fuel storage capacity Jet A 2100 truck, 31K tank,
AvGas 1000 truck



Corvallis (owner City of Corvallis) elevation
250' MSL FAA ID: CVO
Runway 3100 x 75, 5900 x 150, asphalt
Runway lights – yes, PCL
Approaches – ILS, GPS, RNAV, VOR
Tower - no
Fuel – 100LL, JetA
FBO – Corvallis Aero Services (541) 753-4466
Repairs - major
Fuel storage capacity – Jet A 2000 truck, 12K
tank, AvGas 2K truck, 24K tank



Cottage Grove (owner OR Dept of Aviation)
elevation 641 FAA ID: 61S
Runway 3201 x 60, asphalt
Runway lights - yes, PCL
Approaches - visual
Tower - no
Fuel – 100LL
FBO - none
Repairs – no
Fuel storage capacity 6000 Avgas



Eugene (owner City of Eugene) elevation 373

FAA ID: EUG

Runway 6000 x 150, 8009 x 150 Asphalt

Runway lights yes, PCL

Approaches – ILS, GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO – Atlantic Aviation (541) 688-9291

Repairs - major

Fuel storage capacity – Jet A 90K tank



Gates (privately owned but public use)

Elevation 1008 FAA ID: 6S4

Runway 1960 x 50, turf

Runway lights - none

Approaches - visual

Tower - no

Fuel - no

FBO - none

Repairs -none

Fuel storage capacity - none



Hubbard (Lehnhardts) (privately-owned but public use) elevation 165 FAA ID 7S9

Runway 2956 x 45, asphalt

Runway lights yes, PCL

Approaches - visual

Tower - no

Fuel – 100LL

FBO – Airhaven (503) 651-2187

Repairs - none

Fuel storage capacity—n/a



Independence (owner OR Dept of Aviation elevation 160 MSL, FAA ID 7S5)
Runway 3202x 60, asphalt
Runway lights – yes, PCL
Approaches - visual
Tower - no
Fuel – Jet A, 100LL
FBO – Nutsch Air (503) 428-7209
Repairs - minor
Fuel storage capacity—12K Jet A tank, 8K Avgas tank



Lebanon (owner OR Dept of Aviation) elevation 310 MSL FAA ID: S30
Runway 2747 x 60, asphalt
Runway lights – yes, PCL
Approaches - visual
Tower - no
Fuel – 100LL
FBO – LebanAir (541) 258-5029
Repairs - major
Fuel storage capacity n/a



McKenzie Bridge (owner OR Dept of Aviation) elevation 1620' MSL FAA ID: 00S
Runway 2605 x 90 turf
Runway lights - none
Approaches - visual
Tower-no
Fuel - none
FBO -none
Repairs - none
Fuel storage capacity - none



McMinnville (owner City of McMinnville) elevation

Runway 5420 x 100, 4340 x 75 asphalt

Runway lights - yes, PCL

Approaches – ILS, GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Potcake Aviation (563) 376-0190

Repairs - major

Fuel storage capacity – Jet A 12K



Newberg (Chehalem) (owner private owner but public use) elevation 190' MSL FAA ID: 17S

Runway 2285 x 40 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel – 100LL, Jet A

FBO – Precision Support Services (503) 537-0108

Repairs -

Fuel storage capacity—n/a



Newberg (Sportsman Airpark) (privately owned but public use) elevation 181' FAA ID: 2S6

Runway 2755 x 50 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel – 100LL, Jet A

FBO – (503) 538-2134

Repairs - major

Fuel storage capacity—n/a



Oakridge (owner OR Dept of Aviation) elevation

1353' MSL FAA ID: 5S0

Runway 3610 x 47 asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Salem (owner City of Salem) elevation 213' MSL

FAA ID: SLE

Runway 5811 x 150, 5146 x 100 asphalt

Runway lights – yes. PCL

Approaches – ILS, GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO – Salem Air Center (503) 364-4158

Repairs - major

Fuel storage capacity – Jet A 20K tank, 6K truck,
Avgas 16K tank, 750 truck



Santiam Junction (owner OR Dept of Aviation)

elevation 3780' MSL FAA ID: 8S3

Runway 2860 x 150, gravel

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

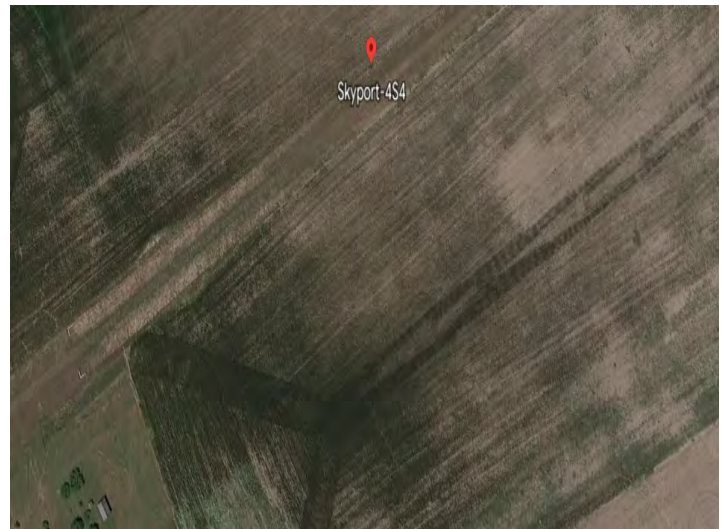
Repairs - none

Fuel storage capacity - none



Portland metro

Cornelius (Skyport) (privately owned but public use) elevation 174' MSL. FAA ID: 4S4
Runway 2000 x 75, turf
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Hillsboro (Twin Oaks) (privately owned but public use) elevation 170' MSL FAA ID: 7S3
Runway 2465 x 48 asphalt
Runway lights – yes, PCL
Approaches - visual
Tower - no
Fuel – 100LL
FBO – Twin Oaks Airport (503) 451 3400
Repairs - major
Fuel storage capacity—n/a



Portland Helipad (owner City of Portland)
elevation 78' MSL
Runway 80 x 80 concrete
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Portland International (owner Port of Portland) elevation 30' MSL FAA ID" PDX

Runway 6000 x 150, 9825 x 150, 11000 x 150 asphalt

Runway lights – yes PCL

Approaches – ILS, GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO – Atlantic Air (503) 331-4320

Repairs - major

Fuel storage capacity—2.8M JetA, 100K AvGas



Hillsboro (owner Port of Portland) elevation 208' MSL
FAA ID: HIO

Runway 3821 x 75, 3600 x 60, 6600 x 150 asphalt

Runway lights – yes, PCL

Approaches – ILS, GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO - multiple

Repairs - major

Fuel storage capacity—104K JetA, 60K AvGas



Troutdale (owner Port of Portland) elevation 38' MSL
FAA ID: TTD

Runway 5399 x 150 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO – Gorge Winds Aviation (503) 661-1044

Repairs - major

Fuel storage capacity—12K JetA, 10K AvGas



Mulino (owner OR Dept of Aviation) elevation

259' MSL FAA ID: 4S9

Runway 3425 x 100 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL

FBO – Infinite Air (541) 730-3245

Repairs - major

Fuel storage capacity—10K AvGas



Scappoose (owner Port of Columbia County) elevation

58' MSL FAA ID: SPB

Runway 5100 x 100 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Transwestern Aviation (503) 543-3121

Repairs - major

Fuel storage capacity – Jet A 10K



Vernonia (owner City of Vernonia) elevation

174' MSL FAA ID: 05S

Runway 2000 x 45 turf

Runway lights - none

Approaches –visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Gorge

Cascade Locks (owner OR Dept of Aviation) elevation 151' MSL, FAA ID: CSZ
Runway 1800 x 30 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Estacada (Valley View) (privately owned but public use) elevation 735' MSL FAA ID: 5S9
Runway 3780 x 32 asphalt
Runway lights – yes, PCL
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



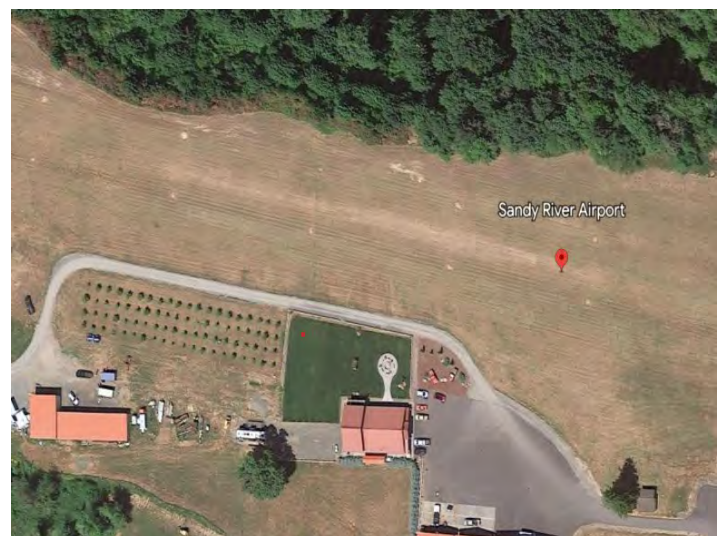
Hood River (Ken Jernstadt) (owner Port of Hood River) elevation 638' MSL FAA ID: 4S2
Runway 3040 x 75 asphalt
Runway lights – yes PCL
Approaches - visual
Tower - no
Fuel – 100L
FBO – Hood Aero (541) 386-1133
Repairs - major
Fuel storage capacity—12K AvGas tank



Sandy (Country Squire) (privately owned but public use) elevation 1175' MSL FAA ID: S48
Runway 3095 x 32 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Sandy River (privately owned but public use) elevation 704' MSL FAA ID: 03S
Runway 2155 x 100 turf
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



The Dalles (owner the City of the Dalles) elevation 246' MSL FAA ID: DLS
Runway 4647 x 100, 5097 x 100 asphalt
Runway lights – yes PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – Hood Aero (509) 767-0005
Repairs - major
Fuel storage capacity Jet A 42K tank, 10K AvGas



Central

Bend (owner City of Bend) elevation 3460' MSL

FAA ID: BDN

Runway 5200 x 75 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower – no (planned for 2025)

Fuel – 100LL, Jet A

FBO – Sky Service (541) 388-0019

Repairs - major

Fuel storage capacity – Jet A 22K tank, 100LL 5K tank



Lake Billy Chinook (private ownership but public use) elevation 2695' MSL FAA ID: 5S5

Runway 2500 x 32 asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none

Madras (owner City of Madras) elevation 2437' MSL FAA ID: S33

Runway 5091 x 75, 2700 x 50 Asphalt

Runway lights – yes PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Berg Air (541) 475-4899

Repairs - major

Fuel storage capacity Jet A 1200 truck, 12K tank, AvGas 2K truck, 12K tank



Prineville (owner Joint City and County) elevation 3251' MSL FAA ID: S39
Runway 5751 x 75, 4054 x 40 asphalt
Runway lights – yes, PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – City of Prineville (541) 416-0805
Repairs - major
Fuel storage capacity – Jet A 2K truck 15K tank, AvGas 750 truck 12K tank



Redmond (owner City of Redmond) elevation 3082' MSL FAA ID: RDM
Runway 7038 x 150, 7006 x 100 asphalt
Runway lights – yes PCL
Approaches – ILS, GPS, RNAV
Tower - yes
Fuel – 100LL, Jet A
FBO – Leading Edge Jet Center (541) 504-3848
Repairs - major
Fuel storage capacity Jet A 89K



Sisters (privately owned but public use) elevation 3168' MSL FAA ID: 6K5
Runway 3560 x 60 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel – 100LL
FBO – Sisters Eagle Air (541) 7119-0602
Repairs - none
Fuel storage capacity n/a



Sunriver (privately owned but public use)

Runway 5461 x 75 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL

FBO – Sunriver Resort (541) 593-4603

Repairs - no

Fuel storage capacity – Jet A truck 1K tank 10K,
AvGas 10K tank



Southern

Alkali Lake (owner OR Dept of Aviation) elevation

4312' MSL FAA ID: R03

Runway 6100 x 150 gravel

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Ashland (owner City of Ashland) elevation 1888' MSL

FAA ID: S03

Runway 3603 x 75 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel – 100LL, Jet A

FBO – Skinner Air (541) 482-7673

Repairs - major

Fuel storage capacity – Jet A 4K, AvGas 12K



Beaver Marsh (privately owned but public use)

elevation 4638' MSL FAA ID: 2S2

Runway 5000 x 120 dirt

Runway lights none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Illinois Valley (owned by Josephine County) ele-

vation 1394' MSL FAA ID: 3S4

Runway 4807 x 50 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel - 100LL

FBO – The Flying Machine (541) 660-3176

Repairs - major

Fuel storage capacity—n/a



Chiloquin (owned by OR Dept of Aviation)

elevation 4221' MSL FAA ID: 2S7

Runway 3749 x 60 asphalt

Runway lights yes, PCL

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Christmas Valley (owned by the Christmas Valley Parks & Rec District) elevation 4320' FAA ID: 62S

Runway 5200 x 60 asphalt
Runway lights – yes, PCL
Approaches - visual, RNAV
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Toketee (owned by OR Dept of Aviation) elevation 3361' MSL FAA ID: 3S6

Runway 5350 x 60 turf
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Crescent Lake (owned by OR Dept of Aviation) elevation 4810' MSL FAA ID: 5S2

Runway 3608 x 30 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Creswell (Hobby) (owned by City of Creswell) elevation 541 FAA ID: 77S
Runway 3100 x 60 asphalt
Runway lights – yes PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – City of Creswell (541) 895-2913
Repairs - major
Fuel storage capacity – Jet A 10K tank, AvGas 10K tank



Grants Pass (owned by Josephine County) elevation 1130' MSL FAA ID: 3S8
Runway 4001 x 75 asphalt
Runway lights – yes, PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – Pacific Aviation Northwest (541) 479-2230
Repairs - major
Fuel storage capacity – Jet A 4K truck 5K tank



Klamath Falls (owned by City of Klamath Falls) elevation 4095' MSL FAA ID: LMT
Runway 5258 x 100, 10,301 x 150 asphalt
Runway lights – yes, PCL
Approaches – ILS, GPS, RNAV
Tower - yes
Fuel – 100LL, Jet A
FBO – Century Aviation Services (541) 882-4681
Repairs - major
Fuel storage capacity Jet A 10K truck 24K tank, AvGas 3600 truck, 12K tank



Lakeview (owned by Lake County) elevation

4734' MSL FAA ID: LKV

Runway 5310 x 100 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Lake County Airport (541) 947-4222

Repairs - major

Fuel storage capacity Jet A 4K truck, 8K tank



Malin (owned by City of Malin) elevation

4053' MSL FAA ID: 4S7

Runway 2800 x 30 asphalt

Runway lights - none

Approaches - visual

Tower -no

Fuel – 100LL

FBO - none

Repairs - none

Fuel storage capacity—n/a



Medford (owned by Jackson County) elevation

1335' MSL FAA ID: MFR

Runway 8800 x 150 asphalt

Runway lights yes, PCL

Approaches – ILS, GPS, RNAV

Tower - yes

Fuel – 100LL, Jet A

FBO - Million Air (541) 842-2254

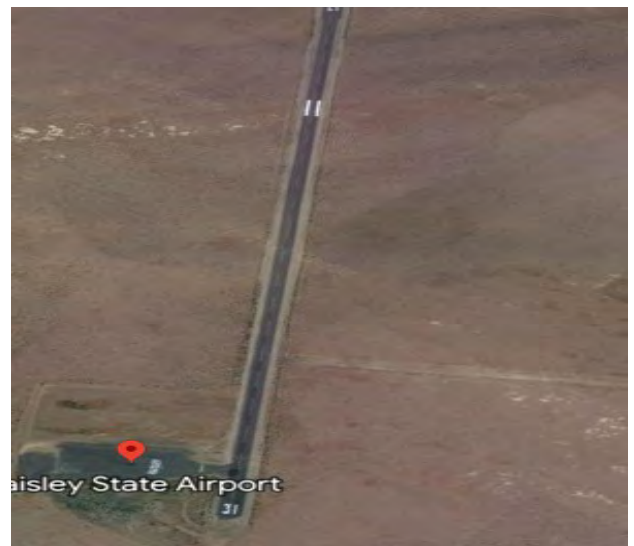
Repairs - major, minor
Fuel storage capacity Jet A 175K tank, AvGas 25K tank



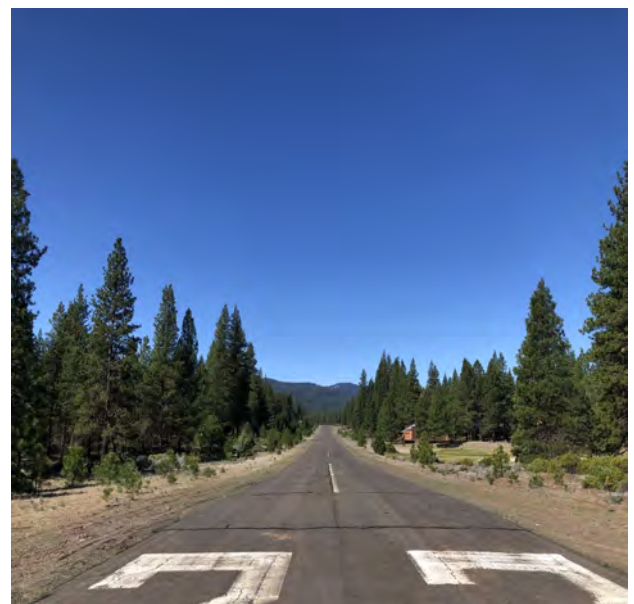
Myrtle Creek (owned by City of Myrtle Creek) elevation 619'MSL FAA ID: 16S
Runway 2600 x 60 asphalt
Runway lights yes, PCL
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Paisley (owned by Lake County) elevation 4395'MSL FAA ID: 22S
Runway 4300 x 60 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Pinehurst (owned by OR Dept of Aviation) elevation 3643'MSL FAA ID: 24S
Runway 2798 x 30 asphalt
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



Prospect (owned by OR Dept of Aviation) elevation

2578'MSL FAA ID: 64S

Runway 4000x 50 asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Roseburg (Felts) (privately owned but public use) ele-

vation 428'MSL FAA ID: 5S1

Runway 2300 x 100 turf

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Roseburg (Regional) (owned by City of Roseburg) ele-

vation 533'MSL FAA ID: RBG

Runway 5003 x 100 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Western Oregon Flying Services (541) 673-4722

Repairs - major

Fuel storage capacity—Jet A 12K tank, 2K truck, AvGas
12K tank, 700 truck



Silver Lake (owned by US Forest Service) elevation

4492'MSL FAA ID: 45S

Runway 3000 x 55 turf

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Eastern

Arlington (owned by the City of Arlington) elevation

890'MSL FAA ID: 1S8

Runway 5000 x 50 turf

Runway lights - none

Approaches - visual

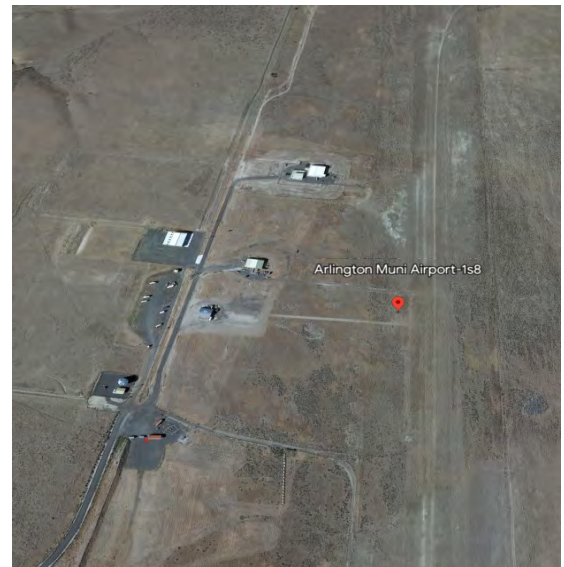
Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Baker City (owned by Baker City) elevation 3573'MSL

FAA ID: BKE

Runway 3670 x 140, 5085 x 100, 4359 x 75 asphalt

Runway lights – yes PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Baker Aviation (541) 523-5663

Repairs - major

Fuel storage capacity Jet A 12K tank



Boardman (owned by Port of Morrow) elevation

395' MSL FAA ID: M50

Runway 4200 x 100 asphalt

Runway lights – yes PCL

Approaches – visual

Tower - no

Fuel – none

FBO – none

Repairs - none

Fuel storage capacity - none



Burns (owned by City of Burns) elevation

4158' MSL FAA ID: BNO

Runway 4600 x 60, 5100 x 75 concrete

Runway lights – yes PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – City of Burns (541) 573-6139

Repairs - major

Fuel storage capacity – Jet A 10K tank



Condon (owned by OR Dept of Aviation) elevation

2911' MSL FAA ID: 3S9

Runway 3500 x 60 concrete

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Enterprise (owned by City of Enterprise) elevation
3957' MSL FAA ID: 8S4
Runway 2850 x 50 asphalt
Runway lights – yes PCL
Approaches - visual
Tower - no
Fuel – 100LL
FBO – Spence Air Service (541) 421-3288
Repairs - none
Fuel storage capacity—n/a



Hermiston (owned by City of Hermiston) elevation
644' MSL FAA ID: HRI
Runway 4501 x 74 asphalt
Runway lights – yes PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – Gorge Aviation Service (541) 781-2199
Repairs - none
Fuel storage capacity – Jet A 7K tank, AvGas 7K tank



Imnaha (Memaloose) (owned by US Forest Service)
elevation 6708' MSL FAA ID: 25U
Runway 1605 x 25 turf
Runway lights - none
Approaches - visual
Tower - no
Fuel - none
FBO - none
Repairs - none
Fuel storage capacity - none



John Day (owned by Grant County) elevation

3702'MSL FAA ID: GCD

Runway 4097 x 60, 5220 x 60 asphalt

Runway lights – yes, PCL

Approaches - GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – Grant County Regional Airport (541) 575-1151

Repairs - none

Fuel storage capacity – Jet A 12K tank, AvGas 12K tank



Joseph (owned by OR Dept of Aviation) elevation

4121'MSL FAA ID: JSY

Runway 5200 x 60 asphalt

Runway lights – yes, PCL

Approaches - GPS

Tower - no

Fuel – 100LL

FBO - none

Repairs - none

Fuel storage capacity - AvGas 10K tank



La Grande (owned by Union County) elevation

2717'MSL FAA ID: LGD

Runway 6261 x 100, 3400 x 75 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

Tower - no

Fuel – 100LL, Jet A

FBO – LaGrande/Union County Airport (541) 963-6615

Repairs - minor

Fuel storage capacity – Jet A 30K tank, 10K truck,
AvGas 2K truck



Lexington (owned by Monroe County) elevation

1634' MSL FAA ID: 9S9

Runway 4156 x 75 asphalt

Runway lights – yes, PCL

Approaches – GPS, RNAV

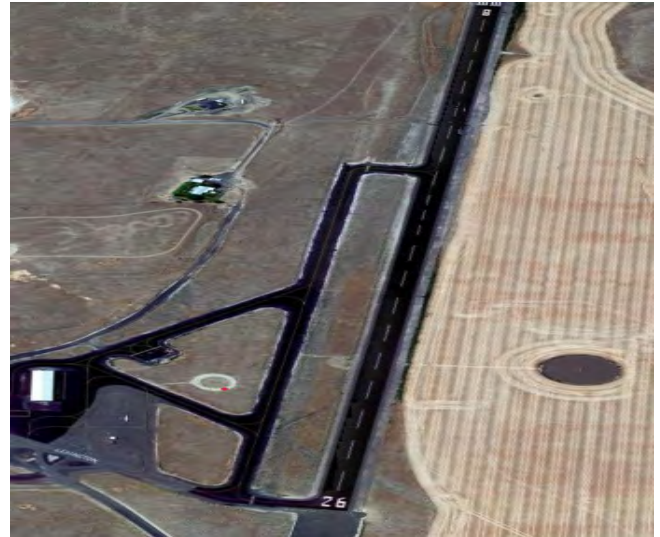
Tower - no

Fuel – 100LL

FBO – Lexington Airport (541) 989-9500

Repairs - none

Fuel storage capacity—n/a



McDermitt (owned by OR Dept of Aviation) elevation

4478' MSL FAA ID: 26U

Runway 5900 x 60 asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Monument (owned by City of Monument) elevation

2323' MSL FAA ID 12S

Runway 2104 x 29 asphalt

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Ontario (owned by City of Ontario) elevation 2193'MSL FAA ID: ONO
Runway 5006 x 100 asphalt
Runway lights – yes PCL
Approaches – GPS, RNAV
Tower - no
Fuel – 100LL, Jet A
FBO – Silver Hawk Aviation (541) 889-9197
Repairs - minor
Fuel storage capacity – Jet A 10K tank, 6K truck, Avgas 6K tank



Owyhee (owned by Oregon Dept of Aviation) elevation 2680'MSL FAA ID: 28U
Runway 1840 x 30 dirt
Runway lights -none
Approaches – visual
Tower – no
Fuel -none
FBO – none
Repairs – none
Fuel storage capacity – none



Pendleton (Eastern OR Regional) (City of Pendleton) elevation 1494'MSL FAA ID: PDT
Runway 6301 x 150, 4800 x 100 asphalt
Runway lights – yes, PCL
Approaches – ILS, GPS, RNAV
Tower - yes
Fuel – 100LL, Jet A
FBO - multiple
Repairs - major
Fuel storage capacity – Jet A 21K tank, AvGas 1200 tank



Rome (owned by OR Dept of Aviation) elevation

4053’ MSL FAA ID: REO

Runway 6000 x 150 gravel

Runway lights - none

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Vale (Miller) (owned by City) elevation 2249’

MSL FAA ID: S49

Runway 2100 x 40 gravel, 3872 x 65 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



Wasco (owned by OR Dept of Aviation) elevation

1503’MSL FAA ID” 35S

Runway 3450 x 60 asphalt

Runway lights – yes, PCL

Approaches - visual

Tower - no

Fuel - none

FBO - none

Repairs - none

Fuel storage capacity - none



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Appendix B—Fuel storage inventory

<u>Coast</u>	Jet A	AvGas (100LL)	No fuel
Astoria	40K	n/a	
Bandon		8K	
Brookings	12K	n/a	
Cape Blanco			x
Florence	4K	6K	
Gleneden Beach			x
Gold Beach	n/a	n/a	
Lakeside			x
Manzanita (Nehalem Bay)			x
Newport	15K	9K	
North Bend	61K	n/a	
Pacific City			x
Powers			x
Seaside			x
Tillamook	12K	12K	
Toledo			x
Wakonda Beach			x
<u>Portland</u>			
Skyport			x
Twin Oaks		n/a	
Portland Helipad			x
Portland International	2.8M	100K	
Hillsboro	104K	60K	
Troutdale	12K	10K	
Mulino		10K	
Scappoose	10K	n/a	
Vernonia			x

	Jet A	AvGas (100LL)	No fuel
<u>Gorge</u>			
Cascade Locks			x
Estacada			x
Hood River		n/a	
Sandy			x
Sandy River			x
The Dalles	22K	n/a	
<u>Valley</u>			
Albany	2K	n/a	
Aurora	52K	n/a	
Corvallis	12K	2K	
Cottage Grove		6K	
Eugene	90K	n/a	
Gates			x
Hubbard		1K	
Independence	12K	10K	
Lebanon		n/a	
McKenzie Bridge			x
McMinnville	12K	n/a	
Newburg/Chehalem	n/a	n/a	
Newburg/Sportsman	n/a	n/a	
Oakridge			x
Salem	20K	n/a	
Santiam Junction			x

	Jet A	AvGas (100LL)	No fuel
<u>Central</u>			
Bend	22K	5K	
Lake Billy Chinook			x
Madras	14K	2K	
Prineville	17K	13K	
Redmond	89K	n/a	
Sisters		n/a	
Sunriver	11K	11K	
<u>Eastern</u>			
Arlington			x
Baker City	12K	n/a	
Boardman			x
Burns	10K	n/a	
Condon			x
Enterprise		n/a	
Hermiston	7K	n/a	
Memaloose			x
John Day	12K	n/a	
Joseph		10K	
La Grande	30K	n/a	
Lexington			x
McDermitt			x
Monument			x
Ontario	16K	11K	
Owyhee			x
Pendleton	21K	1K	
Rome			x
Vale			x
Wasco			x

	Jet A	AvGas (100LL)	No fuel
<u>Southern</u>			
Alkali Lake			x
Ashland	4K	12K	
Beaver Marsh			x
Chiloquin			x
Christmas Valley			x
Crescent Lake			x
Creswell	10k	n/a	
Grants Pass	9K	n/a	
Illinois Valley		n/a	
Klamath Falls	41K	4K	
Lakeview	12K	n/a	
Malin		n/a	
Medford	175K	25K	
Myrtle Creek			x
Paisley			x
Pinehurst			x
Prospect			x
Roseburg-Felts			x
Roseburg Regional	n/a	n/a	
Silver Lake			x
Tuketee			x

Appendix C Report Review Participants

State Agencies

OR Department of Aviation—Kenji Sugahara, Director

OR Department of Emergency Management—Matt Garrett, former interim Director

OR Department of Transportation—Kris Strickler, Director

OR Governor’s office—Jonna Papaefthimiou, State Resiliency Officer

Academia

Oregon State University—Dr. Chris Goldfinger

Portland State University—Yumei Wang

Emergency Preparedness

Port of Portland—Carmen Merlo

Oregon Seismic Safety Policy Advisory Commission—Tiffany Brown

Engineers

Haley Aldrich—Allyson Pyrch

Cities and Counties

Association of Oregon Counties—Mallory Roberts

Legislature

Representative Paul Evans

Airports

Eugene Airport—Andrew Martz (President OR Airport Managers Association)

Portland International Airport—Steve Nagy (Board member, State Aviation Board and OAMA)

Bend Airport—Tracy Williams (Board member OR Airport Managers Association)

Newport Airport—Lance Vanderbeck (past President OR Airport Managers Association)



Cape Blanco State Airport