

Oregon: Overview

Everything in the main manual and the skill guides, the physical techniques, the federal agencies, the underlying science, applies in Oregon exactly as written. What's different here is the specific hazard profile and the state, local, and legal context around it. This page is the starting point; the other three pages under Oregon go deeper on laws, local resources, and the data behind the risks named here.

The one risk that shapes everything else: the Cascadia Subduction Zone

Oregon's coast sits directly above a fault line capable of producing one of the largest earthquakes possible on Earth, and it is overdue by historical standards. The Cascadia Subduction Zone last ruptured on January 26, 1700, in a magnitude-9.0 event that dropped the coastline several feet and sent a tsunami across the Pacific to Japan, where it was recorded in written records with no known local earthquake. Subduction zone earthquakes of this scale recur on average every 400 to 600 years, though the historical interval has ranged from as little as 200 years to as long as 1,000.

The current risk estimates, per Oregon's own Department of Emergency Management and DOGAMI (the state's Department of Geology and Mineral Industries): roughly a 37% chance of a magnitude 7.1+ rupture somewhere on the zone in the next 50 years, and a 10–15% chance specifically of a full-margin magnitude-9.0+ event in that same window, per USGS estimates. A full-margin rupture would generate a tsunami up to 100 feet high along parts of the Oregon coast, arriving in as little as 15 to 20 minutes, before any official warning could realistically reach people in the inundation zone.

This is the reason Oregon's own emergency management agency built its household preparedness campaign around two weeks of self-sufficiency, not the 72-hour standard used in most of the country: a Cascadia event is expected to leave transportation routes, communication networks, and water and power service unusable for that long or longer across a wide swath of the state, not just the coast.

Wildfire is no longer a coastal-forest abstraction

The 2020 Labor Day fires burned roughly 1 million acres in a single week, destroyed more than 4,000 homes, and killed at least 9 people, driven by an unusual east wind event that pushed fire out of the Cascades and into populated valley towns that don't typically think of themselves as fire country. It remains the state's most

destructive wildfire event on record and reset how Oregon's own fire agencies plan for wind-driven fire risk statewide, not just in the traditionally fire-prone areas east of the Cascades.

Extreme heat is a real, recent mass-casualty event here, not a hypothetical

The Pacific Northwest heat dome of late June 2021 pushed Portland to 116°F, a temperature the city had never recorded before by nearly 10 degrees. Confirmed death counts varied as investigations concluded, from an initial 83 confirmed hyperthermia deaths statewide by late July 2021 to a final tally cited at 116 in later reporting; Multnomah County alone confirmed 72 heat deaths from that single event. Most victims were older adults living alone without air conditioning, a real, specific, identifiable vulnerability rather than a generic risk category.

What this means for how you use the rest of this manual

The manual's Tier structure and the skill guides apply without modification. What changes in Oregon: the two-week planning horizon (already the manual's own Tier 1 target) is not a conservative buffer here, it's the state's own emergency management agency's explicit minimum, because Cascadia is the specific scenario that horizon is built around. See the Laws and Resources pages for what's actually different about executing on that plan in Oregon specifically.

Sources

- Oregon Department of Emergency Management, Cascadia Subduction Zone hazard information: oregon.gov/oem
- USGS, earthquake probabilities and hazards in the U.S. Pacific Northwest: usgs.gov
- Oregon Department of Emergency Management, "Be 2 Weeks Ready" campaign rationale: oregon.gov/oem
- 2020 Labor Day fires acreage, home losses, and death toll: Oregon Forest Resources Institute; Wikipedia, sourced to contemporary reporting
- 2021 Pacific Northwest heat dome death toll (evolving across sources as investigations concluded) and Portland's record temperature: OPB; Multnomah County; State of Oregon Initial After-Action Review

Oregon: Laws & Legal Considerations

Several of this site’s skill guides describe Utah-specific legal processes, most directly the Legal Rainwater Harvesting in Utah guide. None of that content applies here without modification. This page covers the Oregon-specific rules that matter most for the skills already covered elsewhere on this site.

Rainwater harvesting: simpler than Utah’s, with one hard restriction

Oregon’s rule is more permissive than Utah’s registration system in one sense (no registration or paperwork requirement for a basic rooftop system) and more restrictive in another (a hard limit on *where* the water can come from).

Rule	Oregon	How it differs from Utah
Source water	Only rooftop catchment, water diverted directly from an artificial impervious surface into a tank or cistern	Utah has no equivalent source restriction beyond the storage-volume tiers
Registration	None required for a typical residential system	Utah requires free registration once storage exceeds 200 gallons
Storage limit	No specific state-imposed volume cap for rooftop systems	Utah caps registered storage at 2,500 gallons before a full water right is needed
Ground/standing water	Cannot be collected at all under this exemption once it has touched the ground	Not a distinction Utah's rule makes

The reason for the rooftop-only rule: Oregon water law treats all water in the state as public, subject to the prior-appropriation permit system, unless a specific exemption applies. The exemption for rainwater applies specifically to water captured directly off an artificial impervious surface (a roof) before it ever reaches the ground or a natural watercourse; water that has already hit the ground is legally indistinguishable from any other surface water and falls back under the full water-rights permit system.

Indoor use needs more than a rain barrel

Using harvested rainwater for outdoor, non-potable purposes (irrigation, washing) has no special requirements beyond the rooftop-source rule. Indoor use, including something as simple as flushing a toilet with it, requires a code-compliant system with backflow prevention to keep it from ever contaminating the potable water supply; check with your city or county building department before plumbing harvested rainwater into any indoor fixture.

Where to find it: OSU Extension publishes a free, Oregon-specific guide (EM 9448, “Rainwater Harvesting in Tanks or Cisterns: Oregon Regulations”) covering both the legal rules and basic system design; contact your local Oregon Water Resources Department (OWRD) watermaster office for anything beyond a basic residential system.

Water rights: prior appropriation, same doctrine as Utah, different agency

Oregon and Utah both use prior-appropriation water law (“first in time, first in right”), the standard doctrine across the western United States, so the underlying logic in the rainwater guide’s discussion of water rights transfers directly. What doesn’t transfer is the agency and the specific process: Oregon’s water rights are administered by the Oregon Water Resources Department (OWRD), not Utah’s Division of Water Rights, and any well, diversion, or water use beyond the rainwater exemption above needs a permit through OWRD specifically.

Defensible space is now a state-level requirement in mapped wildfire hazard areas

Oregon’s State Fire Marshal has established minimum defensible space requirements (ORS 476.392) for property in areas identified on the state’s wildfire hazard map as wildland-urban interface. Where it applies, the property owner must maintain a buffer around all buildings and decks that’s free of combustible vegetation and stored combustible materials (firewood, lumber) within the defined space, based on the International Wildland-Urban Interface Code.

Check your specific property, don't assume

Whether this applies to a given property depends on where it falls on the state’s wildfire hazard map, which local governments can adopt and, in some cases, expand on. Contact your county or the Oregon State Fire Marshal’s office directly to check a specific address, and check with your local fire department for separate, locality-specific burn permit rules before any outdoor burning; these are set locally, not by a single statewide permit.

Where to find it: the Oregon State Fire Marshal publishes a free defensible space checklist covering the specific buffer-zone requirements: oregon.gov/osfm.

Concealed carry: a permit state, unlike Utah’s permitless-carry-for-residents approach

Oregon requires a Concealed Handgun License (CHL) to carry concealed, issued by the county sheriff where the applicant resides, under ORS 166.291–166.292.

Requirement	Detail
Minimum age	21
Competency requirement	A certified safety course including in-person instruction and a live-fire component, or equivalent through organized shooting competition or military experience
Background check	Fingerprint-based, run through Oregon State Police and FBI records; sheriff has 45 days to issue or deny
Cost	Roughly \$115 for a new application, \$75 to renew
Validity	4 years
Reciprocity	Oregon does not recognize any other state's concealed carry permit

This is a real, practical difference from Utah for anyone relocating or splitting time between the two states: a Utah permit carries no weight in Oregon, and vice versa, since Oregon doesn’t extend reciprocity to any other state’s license.

Sources

- OSU Extension, “Rainwater Harvesting in Tanks or Cisterns: Oregon Regulations” (EM 9448): extension.oregonstate.edu
- Oregon Water Resources Department, water rights and prior appropriation: oregon.gov/owrd
- Oregon State Fire Marshal, defensible space requirements and ORS 476.392: oregon.gov/osfm; Oregon Law, ORS 476.392
- Oregon Concealed Handgun License requirements, ORS 166.291–166.292: USCCA Oregon gun law summary

Oregon: Local Resources

The skill guides and addenda on this site point to Utah-specific programs throughout, USU Extension, Be Ready Utah, Utah CERT chapters. Oregon has its own direct equivalents for nearly all of them.

Oregon Department of Emergency Management: “Be 2 Weeks Ready”

Oregon’s own household preparedness campaign, the direct analog to Be Ready Utah, is built explicitly around the same two-week horizon this site’s own manual uses as its Tier 1 target, and for the same underlying reason: a Cascadia Subduction Zone earthquake is expected to leave much of the state’s infrastructure unusable for two weeks or longer, well past the 72-hour standard used in most other states’ campaigns.

Why this matters more here than the name suggests

Oregon adopted the two-week standard specifically because the 72-hour guidance common elsewhere doesn’t reflect what a full Cascadia rupture would actually do to transportation, communication, water, and power infrastructure across a wide part of the state, not just the coast. See the overview page for the hazard data behind this.

Where to find it: oregon.gov/oem publishes the full checklist and planning guidance free.

OSU Extension Service: the direct analog to USU Extension

Oregon State University’s Extension Service runs the same category of skill-building programs this site’s addenda repeatedly point to for Utah, USU Extension, just administered by a different land-grant university.

- **Master Gardener Program:** volunteer training in sustainable gardening and food production, run through county Extension offices across the state, the same structure as Utah’s Master Gardener program.
- **Master Food Preserver Program:** over 40 years running, trains and certifies volunteers in safe home food preservation (canning, drying, fermenting); after the core training, volunteers complete 20–40 hours of community service annually teaching others, the same “learn it, then teach it” progression the Water & Food addendum’s Stage 3–4 content describes for Utah’s Master Food Preserver program.

Where to find it: extension.oregonstate.edu; both programs are run through individual county Extension offices, so availability, cost, and schedule vary by county, the same pattern as Utah's USU Extension programs.

CERT: more than 50 active chapters statewide

Community Emergency Response Team training is free through most local programs and follows the same national curriculum described in the Understanding START Triage guide, disaster medical operations, light search and rescue, team organization, fire safety.

Real, concrete examples of what free actually looks like here

Tualatin CERT runs a free 7-week Basic CERT course twice a year for residents and people working in the city. Milwaukie and Clackamas County run free classes twice yearly, taught by FEMA-certified local trainers, over three 8-hour Saturday sessions (24 hours total). Benton County's course is free with volunteering afterward optional, not required.

Where to find it: the state maintains a directory of all active CERT programs at oregon.gov/oem; email community.preparedness@oem.oregon.gov if your specific area isn't listed or you want to help start a program.

Sources

- Oregon Department of Emergency Management, "Be 2 Weeks Ready" campaign: oregon.gov/oem
- OSU Extension Service, Master Gardener and Master Food Preserver programs: extension.oregonstate.edu; Master Food Preserver Program
- Oregon Department of Emergency Management, CERT program directory: oregon.gov/oem
- Local CERT program details (Tualatin, Milwaukie/Clackamas County, Benton County): city and county program pages

BY STATE › OREGON

Oregon: Risks & Trends

This page is Oregon’s equivalent of the trend-line data behind the Case for Preparedness document’s Utah sections, sized to one state rather than the full national/global picture that document covers. Same standard: every figure below is independently sourced, and figures that vary across sources are noted as such rather than resolved to a single number that looks more precise than the underlying data actually is.

The Cascadia Subduction Zone

Metric	Figure	Source
Chance of M7.1+ rupture, next 50 years	~37%	Oregon DOGAMI / Oregon Dept. of Emergency Management
Chance of full-margin M9.0+ rupture, next 50 years	10–15%	USGS
Last full rupture	January 26, 1700 (M9.0, confirmed via Japanese tsunami records)	USGS, DOGAMI
Typical recurrence interval	400–600 years (range: 200–1,000)	DOGAMI
Projected tsunami height, worst-case coastal areas	Up to 100 ft	Oregon Dept. of Emergency Management
Estimated tsunami arrival time after rupture	15–20 minutes	Oregon Dept. of Emergency Management

The probability figures above describe two different thresholds, not a contradiction: a 37% chance covers any rupture of magnitude 7.1 or greater anywhere on the zone (which could mean a partial rupture affecting only part of the coast), while the 10–15% figure covers specifically a full-margin magnitude-9+ event, the “Big One” scenario that produces the 100-foot tsunami projection and the multi-week infrastructure loss Oregon’s own two-week preparedness standard is built around.

The 2020 Labor Day fires

Metric	Figure
Acres burned	~1.0–1.1 million (figures vary slightly by source)
Homes destroyed	4,000+
Deaths	At least 9 (some sources report up to 11)
Timeframe	Most destruction occurred within a single 72-hour period over Labor Day weekend

What made this event different from Oregon's typical fire season wasn't just scale, it was location: an unusual east wind event pushed fire out of the Cascades and into populated valley towns (Detroit, Blue River, Phoenix, Talent) that hadn't historically planned around wind-driven fire risk the way areas east of the Cascades do. It remains the benchmark event Oregon's fire agencies plan against for wind-driven, structure-loss fire risk statewide.

The 2021 heat dome

Metric	Figure
Portland's peak temperature	116°F, a new all-time record by nearly 10°F
Confirmed hyperthermia deaths, statewide, as of July 26, 2021	83 (State of Oregon Initial After-Action Review)
Statewide death toll cited in later reporting	116
Multnomah County deaths from the event	72, nearly all within a single five-day stretch in June 2021
Demographic pattern	Most victims were older adults living alone without air conditioning

Why the death count moved over time

The gap between the 83-death count in the state's own late-July after-action review and the 116 figure cited in later reporting isn't a data error; it reflects medical examiners finalizing individual investigations and toxicology reports over the following weeks, the same pattern the Case for Preparedness document notes for other disasters' initial-versus-final damage and casualty figures.

What these three have in common

Each of these is the kind of event this manual's Tier 1–2 framing exists for: a sudden onset, a multi-day to multi-week disruption to normal services, and a real, documented history of catching people without the specific preparation that would have mattered most, water and food independence for the Cascadia scenario, defensible space and an evacuation plan for wildfire, a cooling plan and a way to check on isolated older neighbors for extreme heat. None of them are hypothetical for Oregon; all three have already happened in the last five years.

Sources

- Cascadia Subduction Zone probability figures, recurrence interval, and tsunami projections: Oregon Dept. of Emergency Management; USGS
- 2020 Labor Day fires acreage, structure loss, and death toll: Oregon Forest Resources Institute; Wikipedia, sourced to contemporary reporting
- 2021 heat dome temperature record and evolving death toll: OPB; Multnomah County; State of Oregon Initial After-Action Review (June 2021 Excessive Heat Event)