

Missouri: Overview

Everything in the main manual and the skill guides applies in Missouri 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 Missouri go deeper on laws, local resources, and the data behind the risks named here.

Joplin: the deadliest U.S. tornado since modern record-keeping began

On May 22, 2011, an EF5 tornado tore a 22-mile path through Joplin, cutting a six-mile stretch of destruction directly through a densely populated part of the city with winds exceeding 200 mph. It killed 158 people, the deadliest single tornado in the United States since official record-keeping began in 1950, and caused roughly \$3 billion in damage, the costliest tornado on record. See the Risks page for the full data.

New Madrid: the town, and the fault zone, share a name for a reason

Illinois's and Tennessee's pages on this site both cover the New Madrid Seismic Zone from their own state's exposure. Missouri is where the name comes from: the town of New Madrid itself was largely destroyed during the 1811-1812 earthquake sequence, and the zone's epicenters sit within or near Missouri's own borders. This page doesn't repeat the probability figures already covered on those two states' pages; the underlying risk and data are the same regional hazard.

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's different in Missouri: tornado season preparation (a safe room, a weather radio, a practiced shelter plan) deserves the same weight here that this manual gives it anywhere in Tornado Alley, Joplin demonstrates the outer edge of what's actually possible, and southeastern Missouri counties near the New Madrid zone should treat earthquake preparedness as a real, not abstract, consideration.

Sources

- Joplin tornado death toll, path, and damage: Wikipedia, sourced to NWS; NIST

- New Madrid earthquake sequence and the town's destruction: USGS; Missouri Encyclopedia

Missouri: Laws & Legal Considerations

Rainwater harvesting: explicitly protected for both non-potable and potable use

Missouri is one of the more permissive states covered on this site, with a specific statute protecting the right to collect rainwater for either purpose.

Rule	Missouri
Source water	Rooftop or other catchment
Permit required	No, for small-scale residential systems (typically under 100,000 gallons of storage)
Non-potable use	Legal and unrestricted
Potable use	Also legally protected, though appropriate treatment is still required to make it safe to drink
Underlying statute	RSMo §640.648, effective August 28, 2018

Why rainwater harvesting doesn't conflict with Missouri's water rights system

Because Missouri is a riparian state rather than a prior-appropriation state, collecting rainwater on your own property doesn't compete with anyone else's claim to a water source the way it might in a Western prior-appropriation state. This is part of why Missouri's rules are comparatively simple.

Where to find it: the Missouri Department of Natural Resources (dnr.mo.gov) oversees permits for larger systems.

Water rights: riparian, with a brand-new restriction on exporting water out of state

Missouri follows standard riparian reasonable-use doctrine, but a 2025 law added a genuinely new wrinkle: a specific restriction on sending Missouri's water to other states.

Concept	How it works in Missouri
Who holds the right	Landowners touching or lying above a water source
Nature of the right	Access and reasonable use, not ownership of the water itself
Water exports	A law passed in 2025 restricts exporting Missouri water to other states, reflecting a broader push by the legislature to treat water as a resource worth actively protecting rather than just regulating locally

Where to find it: the Missouri Department of Natural Resources administers water resource regulation statewide.

Permitless carry since January 2017, at a distinctive age of 19

Missouri has allowed permitless concealed carry longer than most other permitless states covered on this site, and its minimum age sits between the two thresholds used elsewhere.

Requirement	Detail
Standard	Permitless ("constitutional") carry since January 2017
Minimum age	19 (18 with qualifying military service)
Optional Concealed Carry Permit (CCP)	Available in Standard (5-year), Extended (10 or 25-year), and Lifetime versions; recognized in roughly 36 other states
Local nuance	Municipalities can still require a valid CCP to open carry within city limits, even though concealed carry itself needs no permit statewide

Age 19, an outlier of its own kind

Most permitless-carry states covered on this site set the age floor at 21, and a distinct cluster (Arkansas, Idaho, Indiana, Louisiana, Mississippi, Montana, New Hampshire, North Dakota, South Carolina, South Dakota, and West Virginia as of 2026) set it at 18. Missouri’s 19-year minimum doesn’t match either group, a genuinely distinct threshold rather than the lowest one on the site.

Sources

- Missouri rainwater harvesting statute and potable-use protection: RSMo §640.648; Watershed Committee of the Ozarks
- Missouri's 2025 water export restriction: Missouri Independent
- Missouri permitless carry, minimum age, and optional CCP: Protect With Bear; USA Gun Shop

Missouri: Local Resources

SEMA and Ready in 3

The Missouri State Emergency Management Agency, together with the American Red Cross and the state's homeland security office, runs public preparedness outreach under the Ready in 3 name, built around three core preparedness steps rather than a longer checklist.

Where to find it: health.mo.gov/emergencies/readyin3.

MU Extension: Missouri's version of the other states' land-grant Extension programs

The University of Missouri Extension runs the same category of program as every other state covered on this site, with a notably lighter training requirement than most.

- **MU Extension Master Gardener Program:** a 30-hour classroom Core Course, followed by 30 hours of volunteer service in approved MU Extension activities to certify.

Where to find it: extension.missouri.edu lists the program by county.

CERT: regionally organized, with a formal association covering the St. Louis metro area

Missouri's CERT programs are organized at the city and county level, with the St. Louis region standing out for its level of coordination: more than a dozen individual municipal CERT teams (St. Charles City, St. Charles County, Cottleville, Dardenne Prairie, Lake Saint Louis, O'Fallon, Weldon Spring, Wentzville, and others) operate under the umbrella of the St. Louis Regional CERT Association.

Federal funding structure worth knowing about

The Kansas City and St. Louis metro regions are both Urban Areas Security Initiative (UASI) jurisdictions, meaning their CERT and broader emergency preparedness councils receive direct federal funding, a step beyond the state-and-local-only funding model in less urbanized parts of Missouri.

Where to find it: within St. Louis, contact CEMA at 314-444-5466 or CERT@stlouis-mo.gov; within Kansas City, contact the city's Office of Emergency Management directly; elsewhere, search "[your county] CERT."

Sources

- SEMA and Ready in 3 campaign: Missouri Dept. of Health and Senior Services
- MU Extension Master Gardener Program requirements: MU Extension
- Missouri CERT program structure and St. Louis Regional CERT Association: City of St. Louis; Eureka Fire Protection District

BY STATE › MISSOURI

Missouri: Risks & Trends

Same standard as every other page on this site: every figure below is independently sourced, and figures that vary across sources, or measure genuinely different things, are flagged as such rather than collapsed into one number that looks more precise than the underlying data actually supports.

The Joplin tornado (2011): the deadliest since modern record-keeping began

Metric	Figure
Peak rating	EF5
Deaths	158 (some counts up to 161 including additional indirect deaths)
Injuries	1,000+
Total path length	22.1 mi
Length of path through dense Joplin	~6 mi
Peak winds	>200 mph
Damage	~\$3 billion, the costliest tornado on record
Business structures damaged	553
Residential structures damaged	~7,500 (3,000+ heavily damaged or destroyed)
National ranking	Deadliest single U.S. tornado since modern record-keeping began in 1950; 7th deadliest in all of U.S. history

Joplin surpassed the June 1953 Flint, Michigan tornado, which had held the modern-era record at 116 deaths, by a wide margin, and its combination of maximum-width, maximum-intensity winds passing directly through a dense urban area is part of why it remains the reference case for EF5 tornado risk in a populated area.

New Madrid: where the earthquakes that named the zone actually happened

Metric	Figure
First major earthquake	M~7.5, December 16, 1811
Second major earthquake	M~7.3, January 23, 1812
Third major earthquake	M~7.5, February 7, 1812
Impact on the town of New Madrid	Largely destroyed; residents were still camped in open fields when the final quake struck

Why current probability figures aren't repeated here

Illinois’s and Tennessee’s pages on this site already cover the New Madrid Seismic Zone’s current earthquake probability data (the same USGS figures apply regardless of which state within the zone is asking) and their own state-specific exposure. Missouri’s distinguishing fact isn’t a different probability number, it’s that the zone’s namesake and historical epicenter sit within the state itself.

Sources

- Joplin tornado death toll, path, and damage: Wikipedia, sourced to NWS; NIST
- New Madrid earthquake sequence details: USGS; Missouri Encyclopedia