Hail no! Coloradans expect hail storms in May, June but the threat in "hail alley" remains

Climatologists are trying to figure out how Colorado's rising temperatures will affect the size and frequency of hail storms



Helen H. Richardson, The Denver Post Colorado resident Gregg Crouger shows ten large hail stones he collected after hail hit Louisville. a suburb northwest of Denver. on June 19. 2018.

Big storms spitting hail on Colorado's high plains traditionally peak in May and June but this spring barely sputtered.

And state climatologists are trying to figure out how rising heat will affect the size and frequency of hail in the future. One thing they observe: variability. Multiple heavy hail storms hammered the state between 2017 and 2019. Relatively few hit after 2020.

"The data show big upward trends in places where population has grown a lot — for example, El Paso County — but not that much trend in areas where population hasn't changed much. And even if someone is there to see it, hail is hard to accurately measure because it melts pretty quickly," state climatologist Russ Schumacher said. "So it's really tough to tell how much of these trends are real changes or just based on there being more people to see the hail and submit reports."

Historical records show crop-stripping, car-denting hail wreaking havoc as early as April and as late as October.

The eastern half of Colorado fits into the "hail alley" between the Rocky Mountain foothills and western Kansas, stretching north through Nebraska and south through Oklahoma, an area prone to major storms that drop hail.

And over the past decade, hail has caused more than \$5 billion in damage in Colorado, according to data amassed by the Rocky Mountain Insurance Information Association, an industry group. Insurance industry officials say nearly half of homeowners' premiums are applied toward hail and wind damage costs.

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Colorado ranked second among all states in the number of hail damage claims filed during that period with 312,808 requests for payouts, behind the 605,866 claims filed in Texas.

Typically, two or three significant hail storms rage over Colorado each year that cost \$25 million or more each in damages, industry officials say.

Yet the biggest hail historically fell elsewhere. The largest hailstone on record – 8 inches in diameter, weighing 1.94 pounds — was found in the South Dakota town of Vivian (pop. 98) on July 23, 2010, according to weather service records. Colorado's largest — 4.83 inches diameter — fell at Bethune on Aug. 13, 2019.

Anyplace on Colorado's high plains can experience heavy hail — and destruction. The state's high elevation terrain favors big hail because, when hail forms in the cold air above, it doesn't have as far to fall, and melt, before hitting land.

When hail storms roll through rural areas — hugely dispiriting for farmers — government authorities often don't learn much about it because eastern Colorado is sparsely populated.

For farmers, small hail driven by wind causes the most harm, ripping apart corn and other crops. Larger hail hurts livestock and damages buildings and vehicles.

Urban hail, meanwhile, makes television news showing piles of icy white pellets on roads.

Back on July 30, 1979, in Fort Collins, hailstones killed a baby, according to weather service records. And heavy hail pelted Denver and Colorado Springs in 2017 and 2018.

Recent research suggests large hail may fall more frequently as average temperatures trend upward. But climatologists said they're uncertain how warming will play out.

This week and next, National Weather Service meteorologists said the relatively dry spring will shift into a summer pattern with regular afternoon

"The bad news is we need the moisture from thunderstorms. rain, but not dry lightning," Barjenbruch said. "The lightning starts forest fires. It's too early to say whether this is going to bail us out of any significant drought."

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