On the evening of May 3, 1999, I found myself standing in the middle of a neighborhood in the Oklahoma City suburb of Moore, surveying what could be described as a cataclysm. In every direction, the splintered remains of homes formed a perversely broken skyline as people slowly shuffled out of the wreckage, carrying what they could toward a large church across the street. One person carried a dog. Another had a fishing pole. A school bus filled with National Guard troops rumbled by, and across Interstate 35, a column of black smoke rose into the sky. The smell of wet timber and gasoline hung in the air. Where I stood was one scene of many stretched out over 38 miles. The tornado was on the ground for nearly an hour and a half, churning across multiple counties, towns and cities. At its strongest, wind speeds were estimated as high as 320 mph. Advanced storm tracking technology saved lives, as did Oklahomansâ€™ past experiences with tornadoes. It was a miracle that this billion-dollar storm didnâ€™t kill more than the dozens who perished in central Oklahoma that day. We learned a lot from that storm. Construction techniques improved and reinforced storm shelters became more common. Investments in storm tracking and forecasting went into high gear. If our springtimes were going to be this violent, we needed to be prepared. Fast-forward to last Friday, when I saw the first images of a massive tornado that tore its way through the Midwest and South. Photographs of the ruins of Mayfield, Kentucky, looked strikingly similar to what I saw in Moore years ago. Tornadoes in Kentucky as well as Arkansas, Missouri, Illinois and Tennessee did massive damage, and of this writing, may have killed at least 90 people.

The biggest of them, rated EF-5 (wind speeds of 200 mph or more), traveled 128 miles in Kentucky alone (Kentuckyâ€™s governor estimated it traveled 227 miles total), and may have moved across the landscape just short of 100 mph. Weâ€™ve seen this before. But in December? Tornadoes have been recorded in every month of the year in the United States, and in every state. Weâ€™re used to it here in

Tornado Alley, a stretch of Great Plains states extending from the Dakotas down to Texas. But things are changing. For starters, Tornado Alley looks to be moving east. The violent weather weâ€™ve come to know â€” and have prepared for â€” could soon become more common in Midwestern and Southern states that may not be as well-equipped as we are to deal with them. Also moving is a line that has long divided the drier west from the more humid east. Over the past 30 years, this line â€” extending from Mexico to the Canadian Arctic â€” has slowly pushed eastward. The old line, which once lined up with Oklahomaâ€™s western border with Texas, is now just west of Oklahoma City. Drier conditions in Americaâ€™s breadbasket will spell trouble for thirsty crops and put even more stress on the slowly depleting Ogallala Aquifer, a huge underground reservoir on which much of American agriculture depends. To survive, farmers may have to soon choose hardier crops to plant, or give up farming altogether and try ranching instead. Tourism in western states could also take a hit. Ski seasons are getting shorter, and there is talk that some parts of Californiaâ€™s Sierra Nevada Mountains will have snowless winters later this century. Dwindling snowpack is also stressing the Colorado River, the reservoirs it fills, and ultimately a number of large western cities that depend on an overtaxed and dying watershed. Ongoing drought in the West has also created longer, more intense fire seasons, and as moisture sinks and temperatures rise, drought-weakened forests become ripe for pests that have obliterated massive swathes of woodlands from the southern Rockies all the way into Canada. More dead trees mean more fuel for fires, intensifying the cycle of wildfires. Another trend: unpredictability. Near-record cold befell much of the country, including Oklahoma, last February, causing a scramble to find fuel for natural gas-fired power plants and warm places to stay for homeless populations. Thousands of Texans went weeks without heat or power when bitter cold crippled its power grid. On the opposite end: Record heat in the Pacific Northwest, where temperatures as high as 116 degrees were recorded in the normally temperate city

of Portland, Oregon. Triple-digit heat was recorded as far north as Stony Rapids, a subarctic community in central Canada. And now? It nearly hit 80 degrees last week in Tulsa. Weâ€™ve had more highs over 70 degrees this month than lows below freezing. The month isnâ€™t over, but donâ€™t be surprised if this December goes on record as the stateâ€™s warmest. I donâ€™t lay all this out to make a case for a changing climate. I donâ€™t have to. Things are different now than they were 30 years ago. Thatâ€™s not an opinion; itâ€™s fact. What I am saying is we need to make resiliency a top priority. Power companies want to spread costs related to last Februaryâ€™s deep freeze over the span of up to 25 years. But what happens if another equally severe cold snap happens a year from now? Or next month? How far into the future can we push those costs? And will Texas glumly accept systemwide outages when its fragile power grid buckles under the weight of weather extremes? Random weather events happen, but climate is all about patterns, and what theyâ€™re showing us is a need to fortify ourselves. I imagine Kentuckians will soon have discussions about weather warning systems and construction techniques like we did in 1999. Farmers, conservationists and climate experts will talk about how to move forward in a drying Heartland. The ways we consume water and electricity need examination. And so on. We need to have real discussions about these topics â€” at the local, state and federal level. Nature will keep doing what it does, and we can either learn to live within it or be pummeled by it.