

Rainy season unleashes with fury, beauty in US Southwest

September 2 2021, by Felicia Fonseca



Flagstaff police officers stand at the edge of street flooding, Tuesday, Aug. 17, 2021, in Flagstaff, Ariz. Workers and residents in Flagstaff were assessing damage, clearing away debris and cleaning up Wednesday from a flood caused by historic levels of rain that fell on a burn scar from a large wildfire two years ago. Credit: Jake Bacon/Arizona Daily Sun via AP

After two bone-dry years that sank the U.S. Southwest deeper into drought, this summer's rainy season unleashed with fury.

Monsoon storms have brought spectacular lightning shows, bounties of wildflowers and mushrooms, and record rainfall to the region's deserts. They've also brought destruction, flooding streets and homes, and leading to some swift water rescues and more than a dozen deaths.

It's a remarkable reversal from 2019 and 2020, when the annual period known simply as "the monsoon" left the region parched. The seasonal weather pattern that runs from mid-June through September brings high hopes for rain, but the moisture isn't guaranteed.

"That traumatized a lot of us here in the Southwest, really worried if the monsoon was broken," said Mike Crimmins, a climatologist at the University of Arizona. "And then here 2021 monsoon comes along, and it's almost like we're trying to make up for the last two seasons."

Tucson, in southern Arizona, marked its wettest July on record and was sitting at No. 3 on Thursday for record rainfall during a monsoon. The Phoenix airport is above average for the season but far from hitting the city's record, the National Weather Service said. Some higher-elevation cities in metropolitan Phoenix fared better.



Two vehicles navigate a flooded 15th Avenue during a rain storm, Friday, July 30, 2021. Credit: Randy Hoefl/The Yuma Sun via AP

Payson has logged nearly 13 inches (33 centimeters) of rain so far—about 6 inches (15 centimeters) above [normal](#). An area south of Flagstaff had hail that measured 2.5 inches (6.4 centimeters) in diameter, according to the weather service.

"That's usually something you see in the news across the Midwest in tornado season," said meteorologist Cindy Kobl in Flagstaff. "Forecasters that have been here for decades can't even say the last time they've seen hailstones that big in the state."

Some locations like Window Rock, on the Navajo Nation, and Farmington, New Mexico, were just behind normal so far for the season. The Hopi Tribe recently ordered livestock reductions on the reservation in northeastern Arizona that's in severe to extreme drought.

"The whole Four Corners area has just been annihilated by drought," said Clay Anderson, a meteorologist in Albuquerque. "They've seen some improvement, but they need a lot more."



Paradise Wash floods Tuesday, Aug. 17, 2021 in Flagstaff, Ariz. Workers and residents in Flagstaff were assessing damage, clearing away debris and cleaning up Wednesday from a flood caused by historic levels of rain that fell on a burn scar from a large wildfire two years ago. Credit: Jake Bacon/Arizona Daily Sun via AP

Roswell, in southeastern New Mexico, has received nearly double its normal rainfall, while Albuquerque to the northwest was lagging. Rainfall can fluctuate wildly even within cities because of the hit-and-

miss nature of the monsoon.

The remnants of Tropical Storm Nora pushed moisture into the region this week, boosting rainfall totals. With each storm, officials warn of potential flooding dangers. At least 10 people have died in Arizona since the monsoon started this year, and at least four in New Mexico in flooding events.

Despite the abundant rainfall, the region is still trending toward hotter, drier weather because of climate change. All of Arizona is in some level of drought and most of New Mexico, according to the [U.S. Drought Monitor](#).

"I'm really trying to enjoy it for what it is right now, because I don't think we'll see this every summer," Crimmins said.



In this Aug. 10, 2021, file photo a woman climbs out of a pickup truck as Northwest Fire District firefighters position themselves for a water rescue in the Cañada del Oro Wash north of Tucson, Ariz. After touring a small community where flooding inundated homes and led two deaths, Gov. Doug Ducey, on Friday, Aug. 20, praised the community of Gila Bend and other areas of the state that have endured flooding from this year's summer monsoon rains. Credit: Rick Wiley/Arizona Daily Star via AP, File

The monsoon is characterized by a shift in wind patterns that pull moisture in from the tropical coast of Mexico. Many cities in Arizona and New Mexico get much of their annual rainfall during the monsoon. In a strong season, the moisture extends into southern Utah, Colorado and California, Crimmins said.

The downpours can replenish shallow aquifers and boost reservoirs temporarily. But the rain isn't a fix for drought-stricken lakes and rivers, like the Colorado River, anywhere in the U.S. West. Those systems rely primarily on melting snow and have been dwindling for more than two decades because of a megadrought.

The expected La Nina weather pattern this winter means snowpack in the West could be in short supply, forecasters say. That worries fire managers who have been battling increasingly more severe blazes, like those in California.



This photo provided by the Arizona Department of Transportation shows flood damage along US 60 west of Miami, Ariz. on Wednesday, Aug. 11, 2021. Forecasters warned that runoff from wildfire burn scars could trigger mudslides and produce flows carrying debris through normally dry washes. Credit: Arizona Department of Transportation via AP

"The net effect of a robust monsoon is that it helps in the short-term but can set the Southwest up for an active and prolonged fire season for the following year or two," said Punky Moore, a spokeswoman for the U.S. Forest Service's Southwest Region.

The same vegetation that can fuel wildfires when it dries up also feeds

insects, said Gene Hall, an entomologist at the University of Arizona. More butterflies, more moths and more pesky mosquitoes, he said.

Some insects, such as the cockroach-like Palo Verde beetle, come out only during the monsoon to mate. Flying ants and termites gather by the hundreds or thousands to mate after monsoon rain, Hall said.

"Water is life in the desert, and we've had a lot of water," he said. "Everything seems to be doing pretty well."

Count mushrooms in.

Christopher May of Scottsdale has found more than 100 varieties of fungi during trips to Arizona's mountains this summer, including some rare ones. With more rain, they're easier to find, sometimes cloaking the forest floor like coral reef in the sea, he said.



Yuma, Ariz., residents fill sandbags in preparation for anticipated heavy rainfall from the remnants of Tropical Storm Nora , Monday, Aug. 30, 2021, at the City of Yuma sandbag fill station in the parking lot at Yuma Civic Center. Credit: Randy Hoeft/The Yuma Sun via AP



Yuma, Ariz., resident Juan Lucero begins filling the first of many sandbags Monday, Aug. 30, 2021, in the parking lot at Yuma Civic Center, as he and many other area residents prepare for anticipated heavy rainfall from the remnants of Tropical Storm Nora. Credit: Randy Hoeft/The Yuma Sun via AP



Oly Gonzalez carries a full sandbag to his vehicle as he and many other area residents prepare for anticipated heavy rainfall from the remnants of Tropical Storm Nora, Monday, Aug. 30, 2021, at the City of Yuma sandbag fill station in the parking lot at Yuma Civic Center, in Yuma, Ariz. Credit: Randy Hoefl/The Yuma Sun via AP



John Bulick makes sure a sandbag he just filled is securely closed as he and many other area residents prepare for anticipated heavy rainfall from the remnants of Tropical Storm Nora, Monday, Aug. 30, 2021, in the parking lot at Yuma Civic Center, in Yuma, Ariz. Credit: Randy Hoelt/The Yuma Sun via AP



Mary Alice Lopez, left, holds a bag open while her son Danny Lopez fills it as they prepare for anticipated heavy rainfall from the remnants of Tropical Storm Nora, Monday, Aug. 30, 2021, at the City of Yuma sandbag fill station in the parking lot at Yuma Civic Center, in Yuma, Ariz. Credit: Randy Hoefft/The Yuma Sun via AP



In this Aug. 10, 2021, file photo a woman climbs out of a pickup truck as Northwest Fire District firefighters position themselves for a water rescue in the Cañada del Oro Wash north of Tucson, Ariz. After two bone-dry years that sank the U.S. Southwest deeper into drought, this summer's rainy season unleashed with fury. Monsoon storms have brought spectacular lightning shows, bounties of wildflowers and mushrooms, and record rainfall to the region's deserts and mountains. They've also brought destruction, flooding streets and homes and

leading to some swift water rescues and several deaths. Credit: Rick Wiley/Arizona Daily Star via AP, File



In this July 24, 2021 file photo, a man rides a boogie board in a flooded park in Scottsdale, Ariz. After two bone-dry years that sank the U.S. Southwest deeper into drought, this summer's rainy season unleashed with fury. Monsoon storms have brought spectacular lightning shows, bounties of wildflowers and mushrooms, and record rainfall to the region's deserts and mountains. They've also brought destruction, flooding streets and homes and leading to some swift water rescues and several deaths. Credit: AP Photo/Peter Prengaman, File



In this July 23, 2021 file photo, passersby watch the Rillito River rolling along just west of Swan Road after a powerful storm with heavy rain landed over the Tucson area, Ariz. After two bone-dry years that sank the U.S. Southwest deeper into drought, this summer's rainy season unleashed with fury. Monsoon storms have brought spectacular lightning shows, bounties of wildflowers and mushrooms, and record rainfall to the region's deserts and mountains. They've also brought destruction, flooding streets and homes and leading to some swift water rescues and several deaths. Credit: Rick Wiley/Arizona Daily Star via AP, File



In this July 14, 2021 file photo, Shawn Newell digs out piles of muck from her driveway and front garden left behind by extensive flooding in Flagstaff, Ariz. After two bone-dry years that sank the U.S. Southwest deeper into drought, this summer's rainy season unleashed with fury. Monsoon storms have brought spectacular lightning shows, bounties of wildflowers and mushrooms, and record rainfall to the region's deserts and mountains. They've also brought destruction, flooding streets and homes and leading to some swift water rescues and several deaths. Credit: Jake Bacon/Arizona Daily Sun via AP



This 2021 photo provided by the Arizona Mushroom Society, shows a Rocky Mountain red-capped bolete found near Greer, Ariz. This year's summer rainy season unleashed with fury, bringing spectacular lightning shows, and bounties of wildflowers and mushrooms. Credit: Christopher C. May/Arizona Mushroom Society via AP



This 2021 photo provided by the Arizona Mushroom Society shows the Caesar's mushroom found near Clints Well, south of Flagstaff, Ariz. This year's summer rainy season unleashed with fury, bringing spectacular lightning shows, and bounties of wildflowers and mushrooms. Credit: Christopher C. May/Arizona Mushroom Society via AP



This 2021 photo provided by the Arizona Mushroom Society shows meadow coral fungus found near Greer, Ariz. This year's summer rainy season unleashed with fury, bringing spectacular lightning shows, and bounties of wildflowers and mushrooms. Credit: Christopher C. May/Arizona Mushroom Society via AP



Wildflowers are on full display at a popular recreation spot in Flagstaff, Ariz., on Aug. 26, 2021. This years summer rainy season unleashed with fury, bringing spectacular lightning shows, and bounties of wildflowers and mushrooms. Credit: AP Photo/ Felicia Fonseca

"We have some of the best mushroom hunting in the country right now, maybe even the best," he said.

Anissa Doten has a love/hate relationship with the monsoon. She grew up in Tucson, watching the skies light up as thunderstorms rolled in and listening to the rain. It was her favorite kind of weather, magical almost, she said.

Her feelings are more complicated now that she lives in the shadow of a

mountain that burned in 2019 in Flagstaff. The home she shares with her five children repeatedly has flooded this year, including during one storm that officials characterized as a "500-year" rain event.

Each time alerts go off on their phones, they rush to check weather gauges and scramble to ensure everyone is safe and someone is home to pump water and rebuild layers of sandbags.

"It's totally different anxiety-driven action mode," she said.

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