Baby, it’s dry outside: How the drought is affecting Utah

90% of Utah is in ‘extreme drought’ with below average snowpack, dry soils, puny streamflows

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It is unprecedented and it is worrisome.

So much so that Utah Gov. Spencer Cox has declared a state of emergency due to the massive encroachment of drought impacting all the state’s more than 54 million acres.

The U.S. Drought Monitor puts 90% of Utah in the category of “extreme drought” and says that more than 2.7 million people in the state are impacted. Southern Utah recently elevated its drought to exceptional — an even worse category.

“There’s really no reason for people to be watering lawns right now,” said Paul Monroe, general manager of the Central Iron County Water Conservancy District. “But when March 17 rolls around, everybody thinks their lawn should be green because of St. Patrick’s Day.”


The lawn may be yellow, but it is supposed to be, says state water watchers.
A weekly lawn watering guide compiled by the Utah Division of Water Resources advises no outdoor irrigation for the week of March 26 to April 1 for the entire state. The website says the state could save more than 20 billion gallons of water if residents adhered to its provisions week by week.

So how bad is it?

Most of the state is sitting at between 75% and 80% of average snowpack for this water year, which officially ended Thursday.

On its face, that doesn’t sound necessarily that scary.

But Jordan Clayton, supervisor of the Natural Resources Conservation Service’s Utah Snow Survey, said it is more complicated than that.

The summer of 2020 was the driest ever logged in Utah and Nevada since record keeping began 126 years ago.

“We’re seeing soil moisture levels over the last five or six months that are drier than anything we have seen over the last 20 years,” Clayton said. “It is a major talking point for us. ... It is really concerning from a water supply perspective.”

Those dry soils will absorb much of what is already predicted to be a poor performing runoff at anywhere between 25% and 75% of average.
Utah drought conditions

INTENSITY:
None
D0 (Abnormally dry)
D1 (Moderate drought)
D2 (Severe drought)
D3 (Extreme drought)
D4 (Exceptional drought)
No data

SOURCE: National Drought Mitigation Center

“Despite the fact that we have done pretty well the last couple of months in terms of getting a little more snow, the takeaway is pessimistic,” Clayton said. “The outlook for getting water out of the snowpack and having it available for summer use is pessimistic. It is an alarming picture when you look at the summer and how much water is going to be available.”

Heather Patno, a hydraulic engineer with the U.S. Bureau of Reclamation, said the drought is impacting states across the Upper Colorado River Basin.

“These are unprecedented soil moisture conditions,” she said, noting the observed inflows into Lake Powell are at 2002 levels — the driest year on record since Lake Powell started to fill in the 1960s.

While the upper basin will be able to meet its downstream water delivery obligations to lower basin states like Nevada and California, Lake Powell will be sitting at critical elevation levels.

“It is dismal,” she said, adding that Lake Powell at the end of the water year will be at 33% of capacity, with a runoff expected at 47% of average.

The good news, she stressed, is that there has been a smattering of water years over the last two decades in which Lake Powell rose by 50 feet or more.

In 2019, for example, basin-wide snowpack was at 145% of average, she said, and other generous water years helped boost Powell levels.
Wildfires fast and furious

The extremely dry conditions are a harbinger of an early onset to the wildfire season, with land managers such as the Bureau of Land Management, the U.S. Forest Service and the Utah Division of Forestry, Fire and State Lands already wary.

A wind-fueled, human-caused fire roared through more than 2,700 acres this week in Uintah and Duchesne counties.

Jason Curry, spokesman for the state Division of Forestry, Fire and State Lands, said it is not unusual to have wildfires in March, but the dry conditions are alarming.

“The wildfire season is not supposed to start on paper for a couple months, but what we have is poor fuel conditions and poor snowpack,” he said. “It could end up that we have this really wet spring, but we know that as time goes on, that becomes less likely and it will be too little, too late.”

Curry added that what is exceptional about a fire in northeastern Utah this week is how rapidly it grew.

“That is uncommon for March. It is a warning we are looking at and we expect it is going to continue like this.”

Last wildfire season, he noted, broke the record books for the number of human-caused fires in Utah, with more than 1,400 starts due to people.

“This year, conditions are worse off in many ways,” Curry said, “and fire behavior will be worse.”

The National Oceanic and Atmospheric Administration in March warned that nearly half the country is experiencing moderate to exceptional drought conditions in what could be the most significant spring drought since 2013 impacting an estimated 74 million people.

In fact, its seasonal drought outlook into June 30 of this year projects that most of California and all of Nevada, Utah, Arizona, Colorado and New Mexico will have drought that persists.

“The Southwest U.S., which is already experiencing widespread severe to exceptional drought, will remain the hardest hit region in the U.S., and water

supply will continue to be a concern this spring in drought-affected areas,” said Mary Erickson, deputy director of the National Weather Service.

Clayton said the abysmal snowpack in much of the state is made worse by a monsoon season that failed to materialize last year.

When those later summer storms come in, it alleviates the pressure on reservoir storage.

“You don't have to use water from the reservoirs if you are getting it from the sky,” Clayton said.

So how can residents combat the bad hand Mother Nature has dealt Utah this water year?

Cox’s state of the emergency declaration directs residents to slowtheflow.org, which offers tips like refraining from overwatering, taking shorter showers and fixing leaks.

Residents can even sign up for a free water audit in which a trained evaluator will visit their home or business to analyze soil type, grass root depth and sprinkler efficiency. Recipients will end up with a customized irrigation schedule designed for their needs.

The state also offers water saving and money saving rebates to help with both indoor and outdoor water conservation.

Farmhand Levi Thompson cuts drip tape after installing it at Gibson’s Green Acres and Bennett Farms in West Weber, Weber County, on Wednesday, March 31, 2021. Kristin Murphy, Deseret News

Agriculture in jeopardy

Utah’s ranchers and farmers are already taking steps to brace for a financially debilitating season in the agriculture industry.

“Everybody is already kind of switching gears,” said Whitt Sorenson, a Delta resident who supplies chemicals, seed and fertilizer for ranchers and farms in western Utah and into Nevada.

Farmers who normally plant corn, which demands a lot of water, switched to spring grain that can be harvested in 60 to 90 days.

Other farmers have cut back their farming acreage by 30% or even half.

The problem is that corn yields greater revenue per acre and many fields will go fallow.

“It’s like instead of working full time, you have been cut to 20 hours a week.” Sorenson said. “But you still have the same bills to pay. This year, everyone is hunkering down. Mother Nature throws a wrench in the plans, so now there is this scramble on how to keep their farms afloat.”

Rising fuel prices are another wrench, but Sorenson stressed that producers are a resilient bunch who have weathered the hard times before.

“We’ve had a couple good storms down here recently that really rejuvenated them. If it were not for optimism, we would all have a different job. ... We will live to fight another year.”

Bennett Gibson, farm manager for Gibson’s Green Acres and Bennett Farms, shows a yellow onion

Ron Gibson, president of the Utah Farm Bureau, said ranchers and farmers are already holding their breath when it comes to expected cutbacks in the amount of water available for irrigation.

“The reality of it is that for the storage water, we have missed it. We are just not going to get it due to the drought we had last summer and the really dry soil. When the snow melts, it is just going to get sucked in.”

With snowpack below average across the state — southwest Utah is sitting barely north of 50% — that becomes a problem for Utah when 95% of its water comes from snow, Clayton said.

“I would be surprised if we are ever on full water turns,” Gibson added. “No matter where we are at, it is going to be low.”

The next step for Utahns?

Water watchers in this state universally agree: If you are into prayer, ask for rain.