## 10/01/22

As we are painfully aware, the primary driver of natural gas prices during the winter is the weather with natural gas storage levels coming in second. For the third year in a row, forecasters are predicting a La Niña weather pattern for winter 2022/2023. "Triple-Dip La Niña" patterns are rare, but not unprecedented (~ once every 20 years). Likewise, Natural gas Market Analysts are predicting, once again, the only thing that will significantly relieve upward pressure on prices is warmer than normal winter weather.

## Winter 2021/22 Recap

Heading into winter 21/22, forecasting services were predicting a second year of La Niña conditions, but it was expected to be weaker. The Winter Outlook favored warmer-than-average temperatures for the eastern, southern, and central United States. Meanwhile temperatures were favored to be below-average across the Pacific Northwest and northern Plains. This north/south split on temperatures is the pattern that is expected during a La Niña-influenced winter.



Reality wasn't too far off. Above-average temperatures were observed across the Southeast, southern/central Plains, Midwest, and Mid-Atlantic, with below-average temperatures recorded in the Pacific Northwest, Minnesota/Wisconsin and localized areas in southern California and Arizona. The biggest differences were over the Northeast and Southwest, where temperatures were near-normal to below-normal, and not above as favored. In the end, winter 2021/22 turned out to be 5.5% warmer than normal for the continental United States. Winter started warmer-than-normal November through December and January through March all clocked in colder than normal. Once again, the winter was mostly warmer than normal with bouts of extreme cold but overall the winter ended up warmer than normal.

Continental U.S. Gas Weighted HDD vs 30yr Normal				
	2021-22	2020-21	2019-20	2018-19
November	3.0%	18.5%	-12.1%	-14.0%
December	19.7%	8.0%	12.3%	10.3%
January	-6.2%	9.2%	16.7%	0.9%
February	-0.1%	-12.5%	4.5%	-1.7%
March	-5.4%	16.0%	19.4%	-5.9%
Total Winter	5.5%	7.0%	9.4%	-0.8%

Colder than Normal		
Warmer than Normal		

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## Winter 2022/23 Outlook

The weather forecasts for the upcoming winter are pointing towards La Niña conditions for the third year in a row.



### Typical La Niña weather pattern

The upcoming La Niña is expected to be weaker than the one experienced last winter and is expected to weaken further early next year. This weakening of the La Niña opens the door for other elements to factor into the winter forecast, especially during the second half of the season. To complicate matters, a Polar Vortex is emerging in the Stratosphere over the North Pole which is expected to be weaker and thus more disrupted increasing the chances of bringing cold arctic air south in the form of cold snaps.



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In short, winter is expected to be a mild first half with a colder than normal second half with the potential for severe cold snaps unleashing the coldest air of the entire winter (at times plummeting towards 50 degrees below zero) across the Rockies, northern Plains and most of the central U.S. February is once again the month to watch for these potential cold snaps, and if there is enough snow cover, the strongest push of Arctic air could result in a frost or freeze in southern Texas.



## Northeast – Appalachians to Ohio Valley and Great Lakes

Expected to be below normal temperatures with the coldest periods occurring in January, and again in February. The Northeast region can expect above average snowfall, with the most significant snowstorms in early to mid-January. New England is one of the only areas that can expect above normal snowfall with Boston near normal and Washington D.C., New York, and Philadelphia all expected to be below normal.

## Northern Plains & Great Lakes –North Central U.S. to the Great Lakes

Temperatures are expected to start out normal and transition to below normal with the potential for big cold snaps either way. This region will experience a few winter previews in November and December as waves of cold air dive down from Canada, but the biggest blasts of cod air will hold off until later in the winter. Lake-effect snow is expected to be above normal in the west and below normal towards the east.

## Midwest – NE, IA, KS, MO, Eastern IL

Temperatures are forecast to start out normal with the warmest weather through December focused in the central plains, but the clash of cold air pushed down by the polar vortex and lingering warmth could spark a severe weather event with potential for snow in late November or December. The latter part of winter is expected to transition to below normal with the coldest periods in early to mid-January and mid to late February. Precipitation and snowfall will be above normal in the east and normal to below normal in the west. Snowfall begins as early as November and snowy weather is expected in early to mid-January and throughout February. Snowfall for the season (as a whole) is expected to be below normal but precipitation could end up above normal with a few all-rain events likely to unfold.

## Southern Plains & Southeast – Texas through Florida

In the Southeast, temperatures are forecast to be above normal in the South and below normal in the North. Precipitation is forecast to be below normal in the South and normal to above normal in the North. Precipitation and snowfall in this region will be below normal in the east and normal to below normal in the west. The snowiest periods in this region will occur in early and late January and then again in mid-February.

In Texas and Oklahoma, there is an elevated probability of a somewhat mild winter with normal to above normal temps in the North and above normal in the south. But, keeping in mind Texas' winters the past few years, a cold outbreak shouldn't be ruled out. There's currently an elevated probability of below normal precipitation early in the winter with normal to above normal precipitation towards the end of winter.

#### Pacific Northwest & Northern Rockies

Temperatures are expected to start out normal and transition to below normal in the north around December through March. A wet winter is anticipated but the primary storm track is expected to be more focused on western Canada rather than Washington, Oregon, and Idaho. There is a potential for some moderate systems and occasionally one bigger period where it does get hit hard in the U.S. Northwest. Drought conditions are expected to improve, but it won't be a drought buster.

#### **Southwest**

Temperatures are expected to be above normal, and precipitation is expected to be below normal. The greatest chance for cold and precipitation is expected Jan23 forward.

#### Supporting Graphical Images and Forecasts

The following pages show supporting graphical images and forecast data from NOAA, AccuWeather and The Farmer's Almanac.

Regardless of how the winter unfolds, Encore Energy will be on guard and diligently watch over our customers' gas needs to assure timely and adequate gas deliveries. We appreciate your business!

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#### NOAA Oct22-Dec22 Forecast



#### NOAA Nov22-Jan23 Forecast



#### NOAA Dec22-Feb23 Forecast



### NOAA Jan23-Mar23 Forecast



#### NOAA Feb23-Apr23 Forecast



#### NOAA Mar23-May23 Forecast



AccuWeather

2022 - 23ER w 9 0 MILD. MILD SNOWY COLD, SNOWY WET MILD, MILD, COLD DRY WET SNOWY COLD, DRY MILD, SNOWY MILD. COLD, SNOWY SNOWY COLD, MILD. WET DRY MILD, DRY COLD, DRY COLD. WET MILD, ,0 DRY 2022-2023 WINTER HIGHLIGHTS Compared To Normal (December-February) • SEA WETTER, SNOWIER SNOWIER PERIODS BOS MSP • NYC TURNING COLDER • ORD • SLC • DCA • SFO OMA • DEN WETTER, FLOODING • LAX • ATL PHX • DAL • MIA SEPTEMBER 19, 2022

Farmer's Almanac

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