

## NatGasWeather.com Daily Report©



Issue Time 4:20 am EDT, Friday, October 7th, 2022

Headline: Overnight GFS Adds 5 TDDs but EC Flat. Moderate National Demand Days 1-3, Light Days 4-15.

**7-Day Weather Summary** (Oct 7-13): An early season cool shot will sweep across the Great Lakes, Ohio Valley, and Northeast Fri-Sun w/showers and chilly lows of upper 20s to 40s. The rest of the US will be comfortable w/highs of 60s to 80s besides hotter 90s California and Southwest deserts. Much of the US will again be comfortable next week as highs of 60s to 80s rules besides cooler 50s N. Rockies & N. Plains. Overall, moderate national demand Fri-Sun, then light

**8-15 Day Outlook** (Oct 14-21): The western, central, and southern US will be near to warmer vs normal w/comfortable highs of 60s to 80s, locally 90s. The Midwest & Northeast will be mild to slightly cool as weather systems sweep through w/highs of 50s and 60s, lows of upper 20s to 40s.

15-Day US Nat Gas Demand: MODERATE Days 1-3. LOW Days 4-15.

Weather Market Threat: LOW Today's Power Burn: 26-27 Bcf Nat Gas Flux: -3 (Neutral)

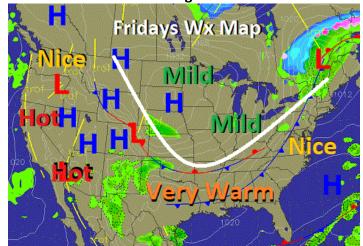
Overnight TDDs Trend vs Yesterday's 12z Data: GFS Ensemble: +5 TDDs or +6 Bcf ECMWF Ensemble: 0 TDDs or 0 Bcf

Weather Discussion & Market Effect: Nov'22 nat gas futures spiked to \$7.18 ahead of Thursday's official session open, dropped to \$7 going into the EIA storage report, briefly plunged when it printed the all-time largest Fall season build ever of +129 Bcf, then spiked back over \$7. However, prices have since sold off and are sharply lower in overnight trade to \$6.73. Just as bears thought they gained control Monday by dropping prices to near \$6.30, bulls bought the dip and rocketed prices to \$7.18. But now that bulls failed to hold \$7, does this mean bears are regaining control? Mixed trends in the overnight weather data, with the GFS adding 5 TDDs but the EC flat and less than 1 TDD changed. The timing of swings in national demand held, with a modest increase in national demand through Sunday as an early season cool shot sweeps across the Great Lakes, Ohio Valley, and Northeast w/lows of upper 20s to 40s. National demand will again become light next week as much of the US again warms into the 60s to 80s besides cooler 40s and 50s across the N. Rockies and N. Plains. The overnight data did gain a few HDDs Oct 15-20 on cool air over S. Canada advancing more aggressively into the Midwest and Northeast. It's not a surprise recent weather data added some demand Oct 15-20, since as we've been mentioning, the risk has been the weather data would trend cooler across the northern US in time. But overall, the coming pattern is still to the bearish side since much of the US will remain relatively comfortable into late October w/highs of 60s to 80s besides 40s-50s near the Canadian border and local 90s over the far southern US. As a result, an impressive streak of larger than normal builds will continue at least 6-7-weeks. Going forward, until sustained cooler than normal temperatures set up across the northern US, weather sentiment will remain bearish.

Nat gas prices have endured another wild week of large daily swings but with bulls and bears yet again failing to convincingly take control. Bears had opportunity Monday when they dropped prices to fresh lows of the past few months before bulls rocketed prices higher immediately after. And after yesterday's EIA report smashed the largest Fall shoulder season build of all time and prices continued to rally, bulls thought they had reclaimed control of \$7. Since then, prices have been in steady freefall to currently near \$6.75. Reasons for such strong buying after Monday's plunge have been evasive and inconsistent with reasons stated as being due to seasonal or technical buying or participants expecting US and global supplies to tighten considerably this winter season. Reasons for selling are much easier to come by and attributed record lower 48-state production near 100 Bcf/day, as well as an impressive string of much larger than normal builds, including the potential for next weeks to print even larger than yesterdays. Clearly, the US supply outlook has improved considerably and where market expectations a few months ago were for end of injection season supplies to be 3.3-3.4 Tcf but have since increased to 3.5-3.6 Tcf. In addition, LNG feedgas has been lower this week on continued Cove Point maintenance, while Freeport LNG remains down into November. For today's trade, we are interested in if bears can regain momentum by holding prices under \$7. Or will there be yet a new reason for bulls to buy the dip to reclaim \$7? Either way, it should be a volatile day ahead of the weekend break with sharp hourly swings.

#### **Selected Weather Images:**

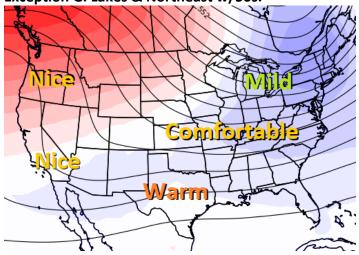
Friday: Hot CA. Very Warm Southern US. Cool Shot Midwest & Great Lakes. Light-Moderate Demand.



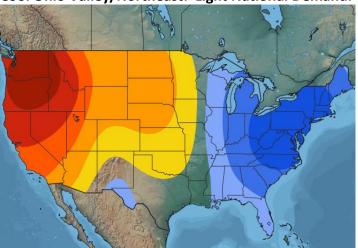
Fri-Sun: Bump in National Demand Due to Slightly Cool Wx Systems Midwest & Northeast w/Lows 30s-40s. Nice to Warm Rest of US.



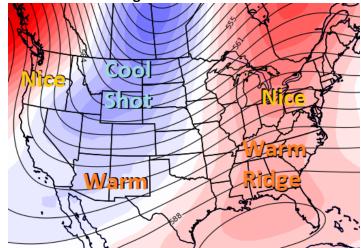
Oct 14-20: Near Seasonal Pattern w/Highs of 60s to 80s Most of US for Light National Demand. Cooler Exception G. Lakes & Northeast w/50s.



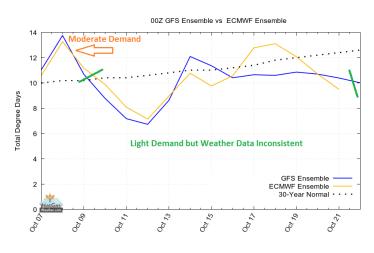
8-15 Day: Nice to Warm Most of US Besides Slightly Cool Ohio Valley/Northeast. Light National Demand.



Next Week: Warm Ridge Eastern US w/Comfortable Highs of 60s to 80s. Nice West Coast to Texas. Cool Shot N. Rockies. Light National Demand.



15-Day TDDs: Overnight GFS Adds 5 HDDs. EC Less Than 1 TDD Changed. Overall, Moderate National Demand Days 1-3, Then Mostly Light Days 4-15.



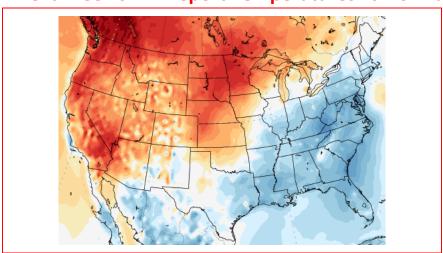
#### **EIA Weekly Nat Gas Storage Report Outlook:**

EIA Weekly Report	Week 1: October 13 (Sep 30-Oct 6)	Week 2: October 20 (Oct 7-13)	Week 3: October 27 (Oct 14-20)
NatGasWeather.com Forecast	+124-134 Bcf	+98-108 Bcf	+80-90 Bcf
5-Year Average	+82 Bcf	+73 Bcf	+66 Bcf
Compared to 5-Year Ave	Larger vs Normal Build	Larger vs Normal Build	Larger vs Normal Build
Recent Trend	Larger Build	No Trend	No Trend

Bullish (cold) NEUTRAL Bearish (Warm)

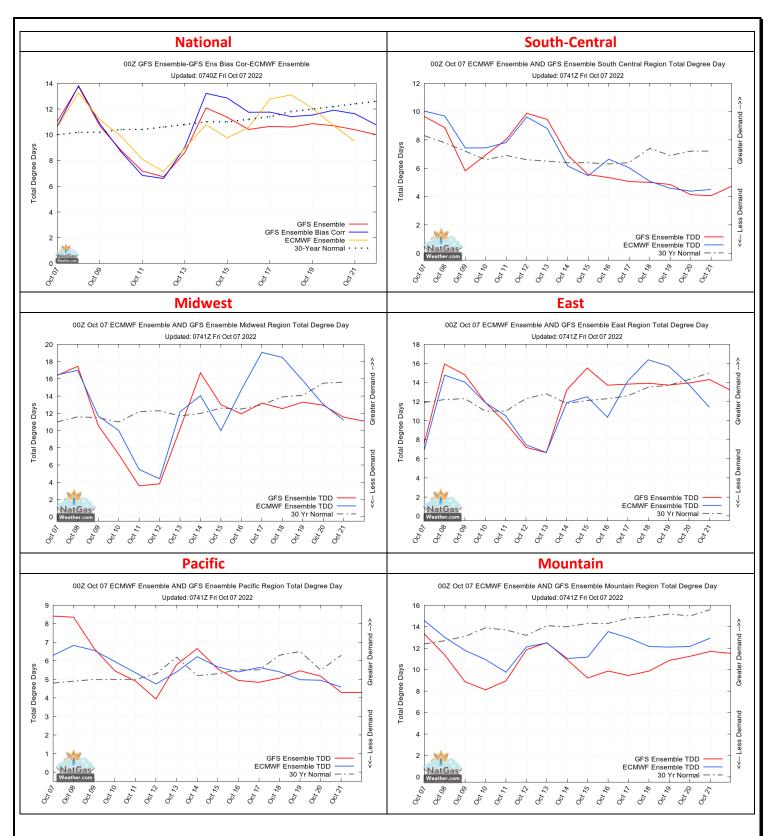
**Notes:** Yesterday's EIA storage report printed a record Fall shoulder season build of +129 Bcf, much larger than the 5-year average of +87 Bcf, increasing supplies to 3,106 Bcf, while improving deficits to -264 Bcf. Next week's EIA report could be even larger and potentially in the +130s Bcf due to minimal coverage of highs into the 90s and lows into the 30s, further improving deficits to near -200 Bcf. The follower couple builds are also expected to be larger than normal, further improving deficits to near -150 Bcf. An impressive streak of larger than normal builds is likely to extend to 6-weeks, while adding a massive 600+ Bcf to supplies, a Fall shoulder season record. Barring much colder trends for late October into November, deficits are likely to improve further. This has increased estimates for end of injection season supplies to over 3.5 Tcf. Of course, recent and coming builds would be smaller if not for the Freeport LNG outage that's keeping nearly 2 Bcf per day of nat gas production in the US instead of being exported overseas.

### **Next Week's EIA Report Temperatures vs Normal**



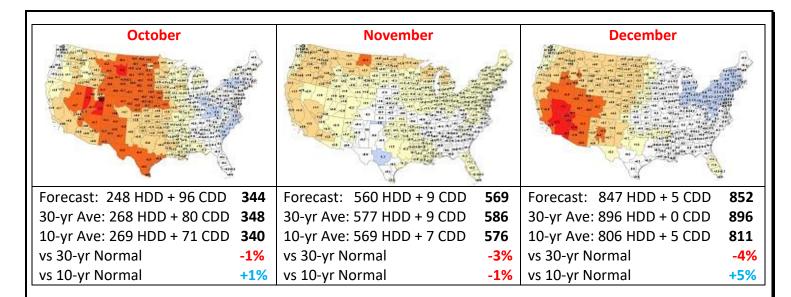




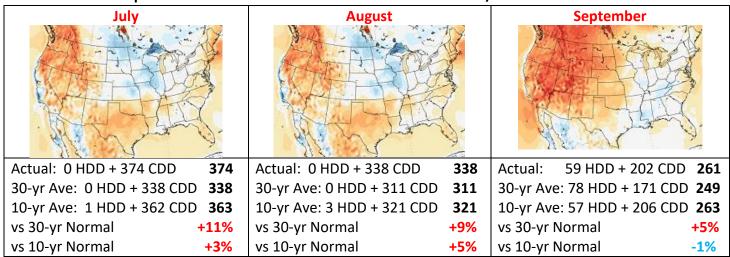


**Summary:** The EC and GFS forecast a minor bump in national demand Fri-Sun as a cool shot sweeps across the Great Lakes and Northeast, then easing back to light for Oct 10-13 as much of the US again becomes warmer than normal. A minor bump in demand is expected Oct 14-17 on weak weather systems into the Midwest and Northeast, then back to light Oct 18-20. It's worth noting, the GFS is several HDDs cooler than the EC for days 8-15 forecast period.

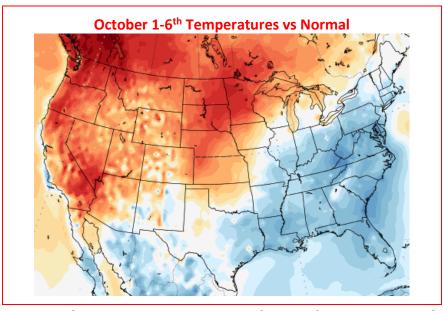
3-Month Temperature Forecast & NatGasWeather.com Forecast HDD/CDD vs 10 & 30-Year Normals



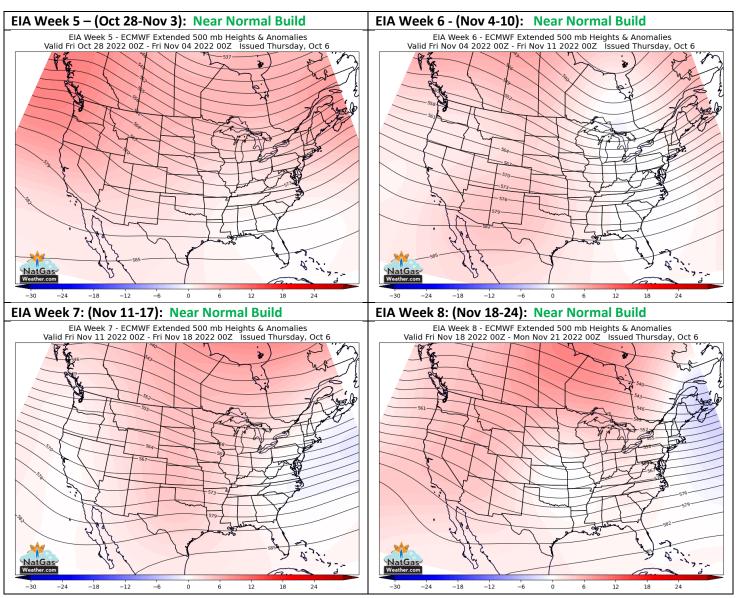
#### Actual Temperatures vs Normal Past 3-Months & Observed HDD/CDD's vs 10 & 30-Year Normals



### **Monthly Temperatures vs Normal**

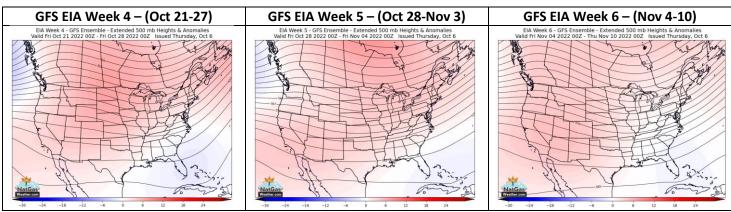


ECMWF EIA Storage Weeks 5, 6, 7, & 8 - 500 mb Heights & Anomalies (updated Tue & Fri)



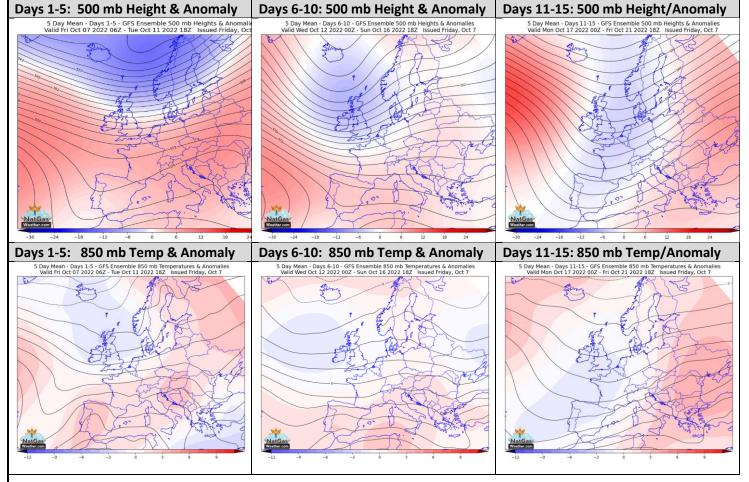
**Summary:** The EC favors October and early November temperatures remaining warm over the southern US, while the northern US will be mild to slightly cool. Overall, light to moderate national demand.

## GFS Ensemble EIA Storage Weeks 4, 5, & 6 – 500 mb Heights & Anomalies (updated daily)



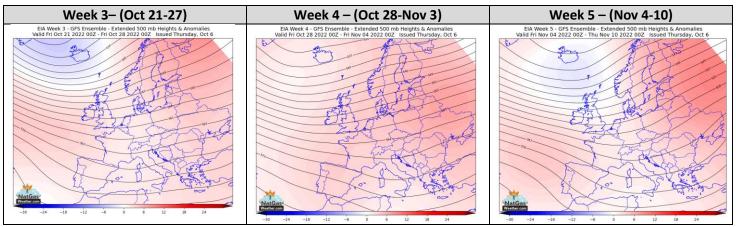
**Summary:** Mild to nice across the northern US is the GFS forecast for late October into early November, while warm over the southern US. An overall mostly light national demand pattern.

### Europe Weather Pattern & Anomaly - Days 1-5, 6-10, & 11-15 (Europe Demand Map)



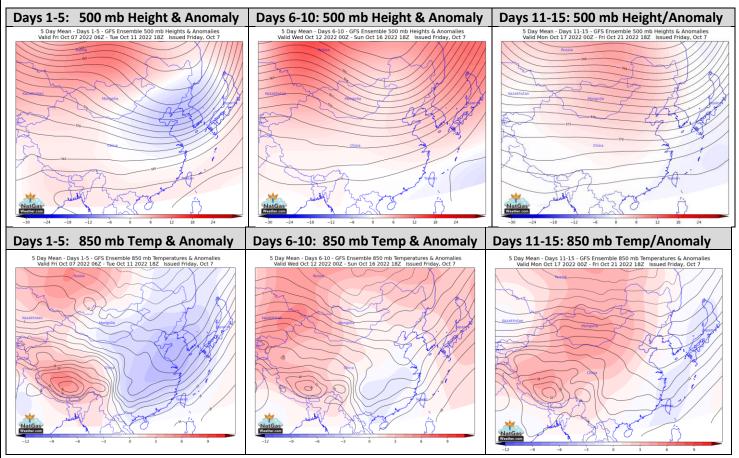
**Europe Summary:** Temperatures will be mostly comfortable over Europe w/highs of 60s to 80s for light demand besides cooler exceptions across northern countries w/highs of 50s to 60s as weather systems track through. Overall, strong summer heat has faded and replaced by a comfortable and typical Fall pattern.

## Europe Weather: Weeks 3, 4, & 5 – GFS 500 mb Heights & Anomalies (updated daily)



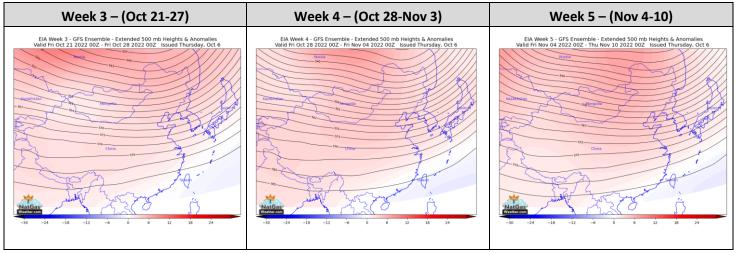
**Summary:** The late October into early November pattern is favored to be near to warmer than normal across southern Europe, while mild to comfortable northern countries. Overall, light late season demand where temperatures will be in the mostly comfortable 60s to 80s besides cooler 40s and 50s Nordic countries.

## Asia Weather 500 mb Pattern & Anomaly – Days 1-5, 6-10, & 11-15 (Asia Demand Map)



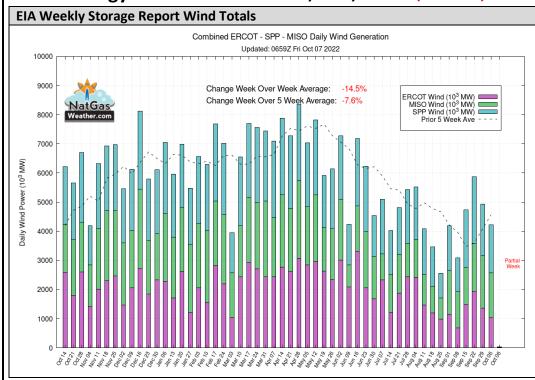
**Asia Summary:** Temperatures will finally cool to more comfortable levels over much of eastern Asia the next 15-days w/highs of 6os to 8os besides local 9os for light to moderate demand.

### Asia Weather: Weeks 3, 4, & 5 – GFS 500 mb Heights & Anomalies (updated daily)



**Summary:** Recent GFS weather data favors comfortable temperatures over most of Asia for late October into early November with highs of 60s to 80s for typically light fall season demand.

### Wind Energy Generation - ERCOT, SPP, MISO (Zoom In!)



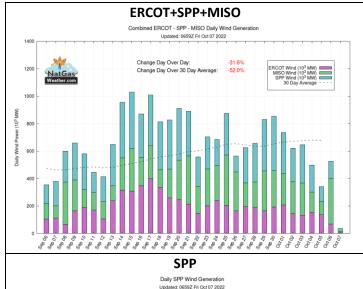
#### **Week Over Week Changes**

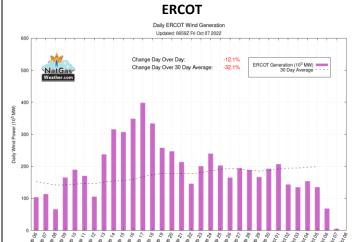
Next Week's EIA Report Week over Week Winds: -15%

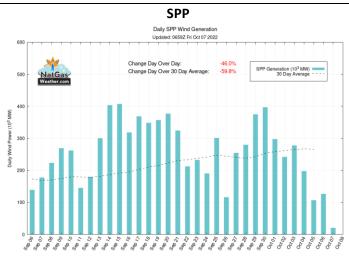
Next Week's EIA Report Winds vs Prior 5-Week Average: -8%

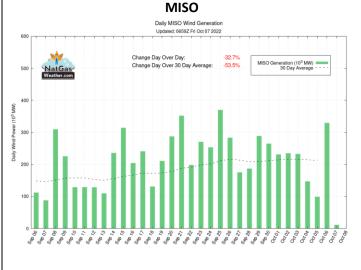
Next week's EIA storage report wind energy generation is -15% less than yesterday's EIA report and -8% less than the prior 5-week average.

Partial Week means still accumulating for new week.



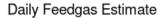


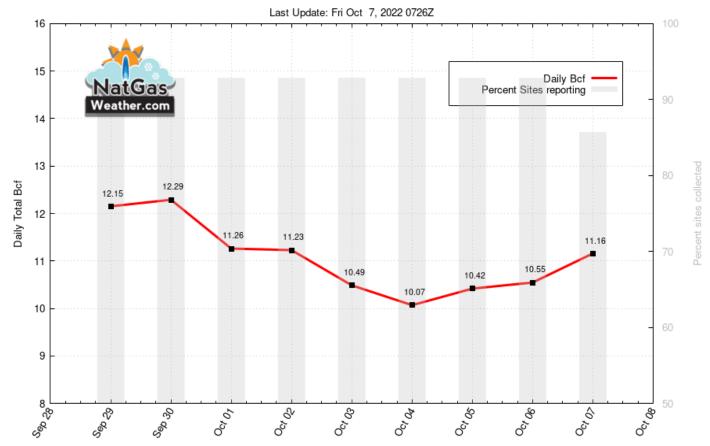


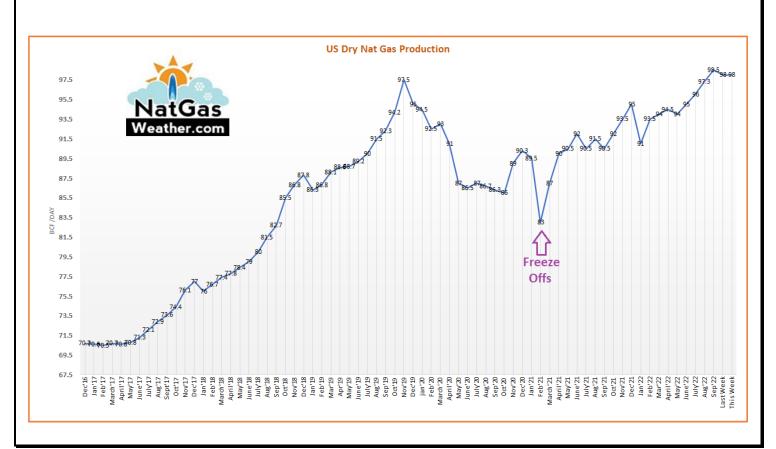


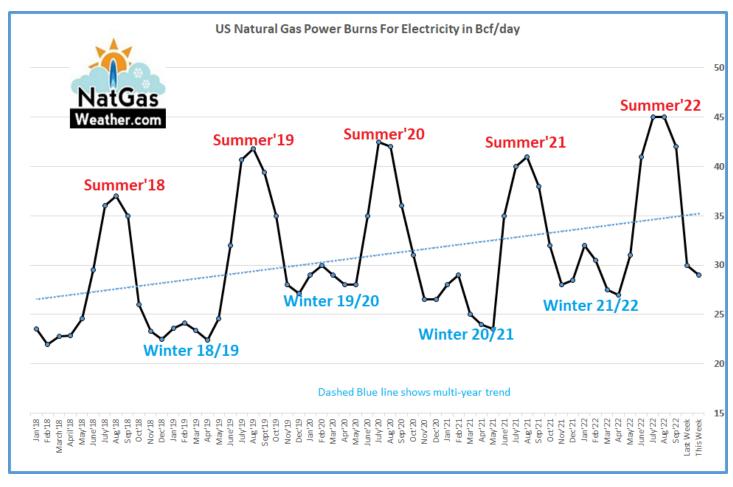
# US LNG Feedgas – Daily (Past 7-Days)

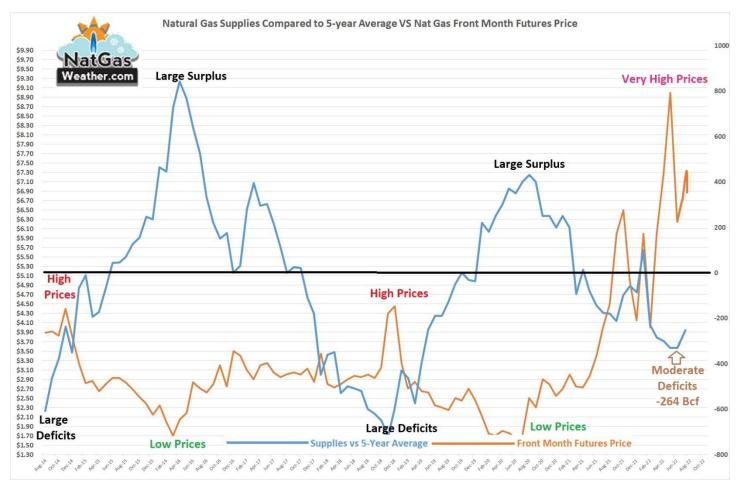
(Experimental)



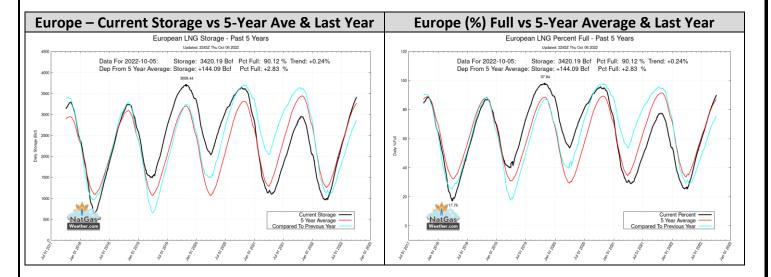




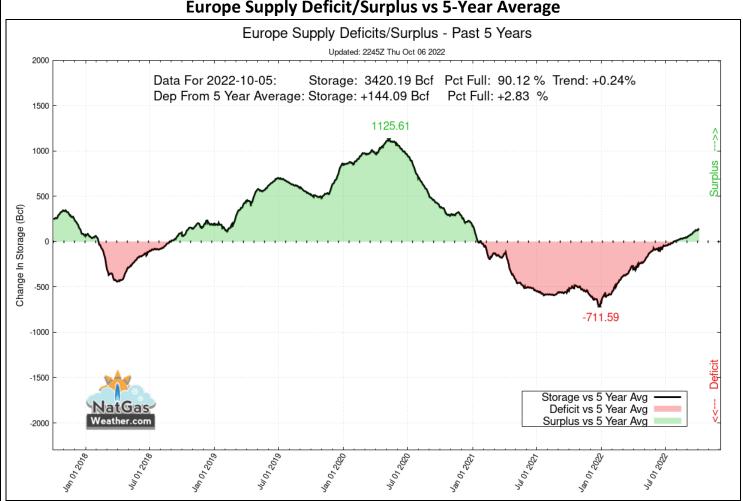




### Europe Supplies - Storage, % Full, Deficit/Surplus vs 5-Year Average (Zoom In!)



#### **Europe Supply Deficit/Surplus vs 5-Year Average**



**Summary:** European storage has recovered to near normal. Supplies are currently 90% full compared to the 5-year average of 88%, or +144 Bcf above normal. Europe supplies changed day over day by +0.2%.





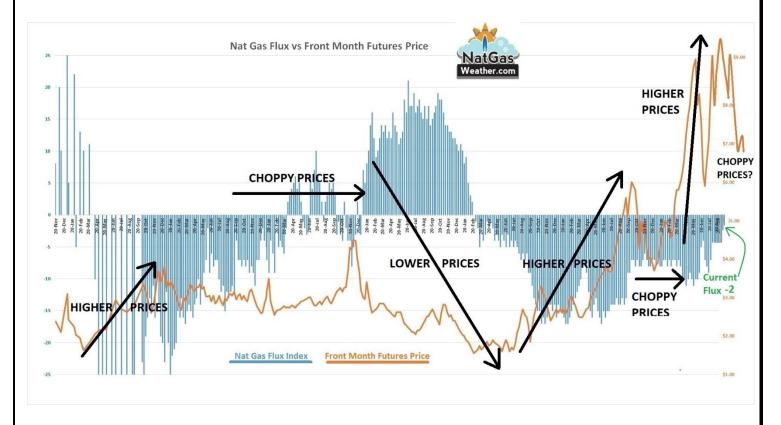
#### Current Nat Gas Flux Index: -3 (Neutral)

#### Nat Gas Flux Strategies – (requires numerous consecutive weeks):

Nat Gas Flux -10 to -35: BULLISH – Buy Moderate to Strong Sell-Offs

Nat Gas Flux -9 to +9: NEUTRAL – Expect Choppy Trade or Price Reversal

Nat Gas Flux +10 to +35: BEARISH - Sell Moderate Price Rallies



We developed the Nat Gas Flux to evaluate price movements in the natural gas markets based on changes in supply/demand dynamics. It assumes normal weather. Below is a description and how to interpret it.

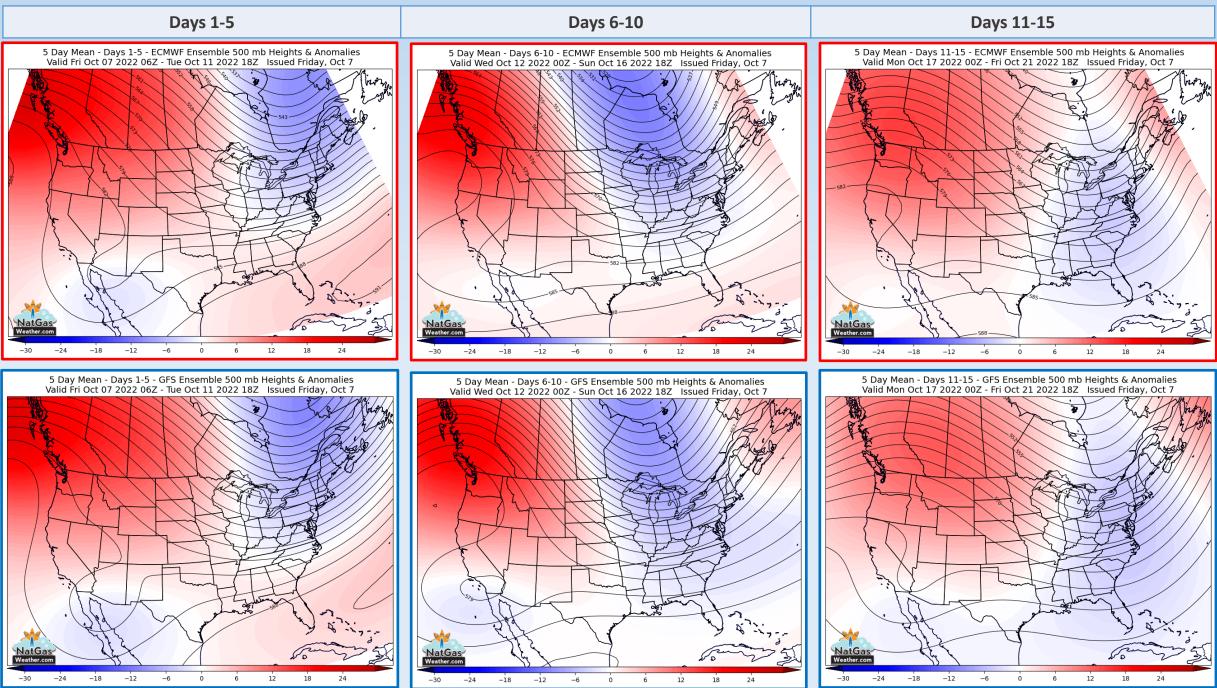
How to read the Nat Gas Flux Index: The index for October 2<sup>nd</sup> continues deeper into the neutral range at -2 due to healthy production at 98-99 Bcf/day, as well as Freeport LNG remaining offline and adding nearly 2 Bcf/day to US supplies. The neutral range tends to bring a price reversal or choppy trade and so far, it's been prices reversing, then enduring wild choppy swings. Blue Nat Gas Flux weekly bars above +9 indicate a structurally loose environment, which our research has shown to historically pressure prices. When the Nat Gas Flux is below -9, prices typically find support. The orange line represents the price of the front month nat gas futures contract. You will see when the blue bars are above zero, such as during 2019, prices were pressured and steadily fell. The Nat Gas Flux Index had been solidly in the bullish range much of 2021 and prices rallied strongly, then sold off and became choppy as it trended to neutral in late winter. The Nat Gas Flux Index returned to neutral over the past month and prices have fittingly become choppy with wild swings, but only after testing \$9-10 several times.

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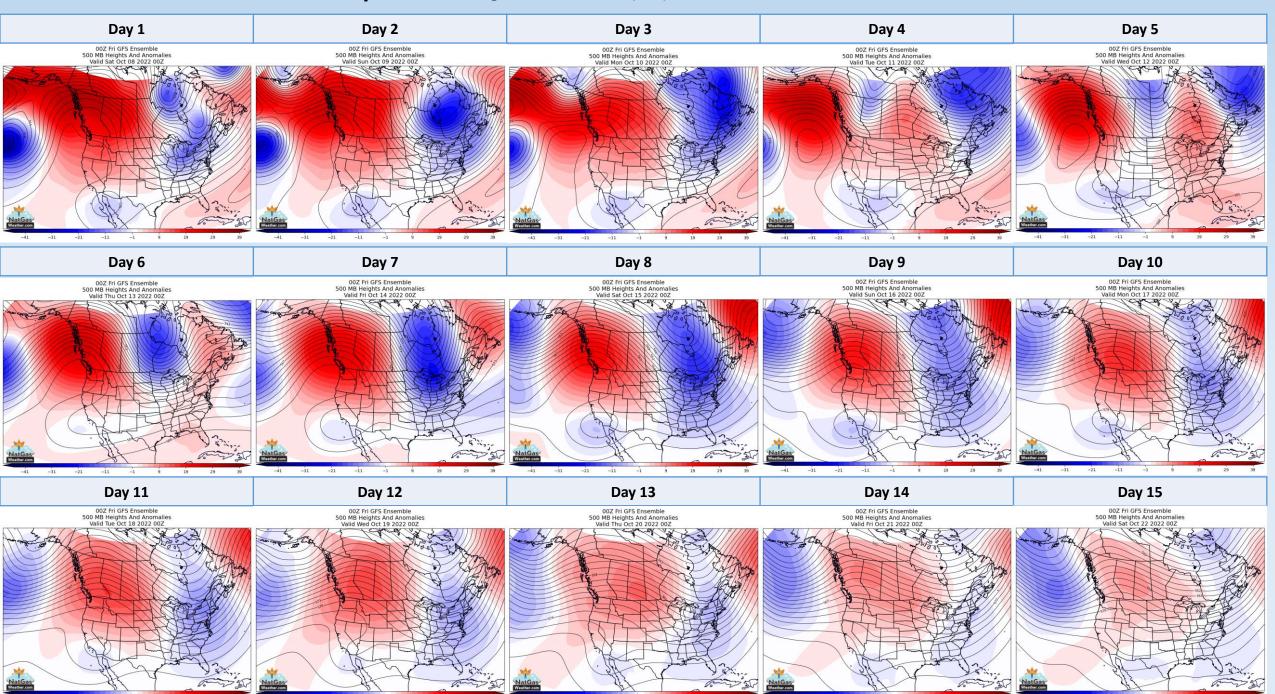




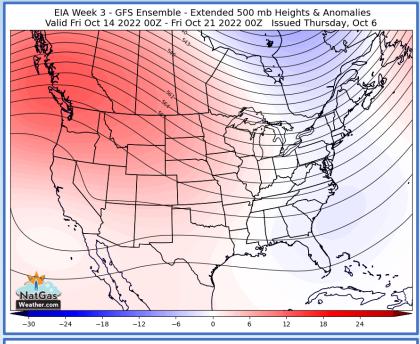
# ECMWF (top) vs GFS (bottom) Ensemble Forecast Maps Days 1-5, 6-10, 11-15 (500 mb Height & Anomaly)

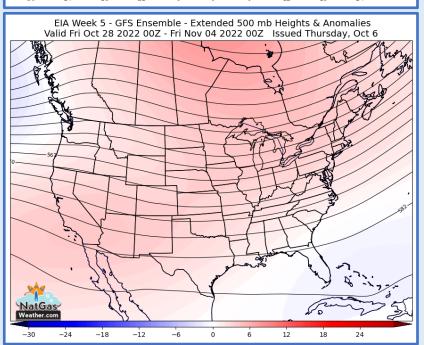


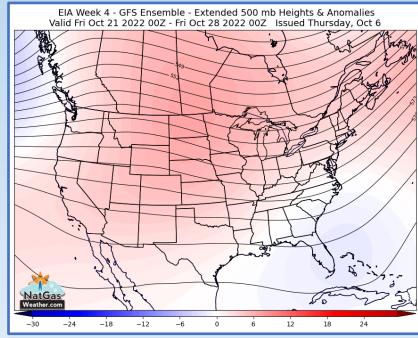
# GFS Ensemble Forecast Next 15-Days – 500 Mb Heights & Anomalies (00z)

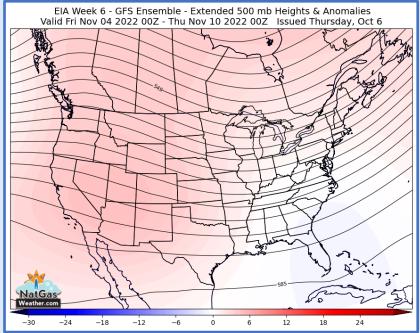


## GFS Ensemble Long-Range Forecast Maps – EIA Weeks 3, 4, 5, & 6 (500 mb Height & Anomaly)



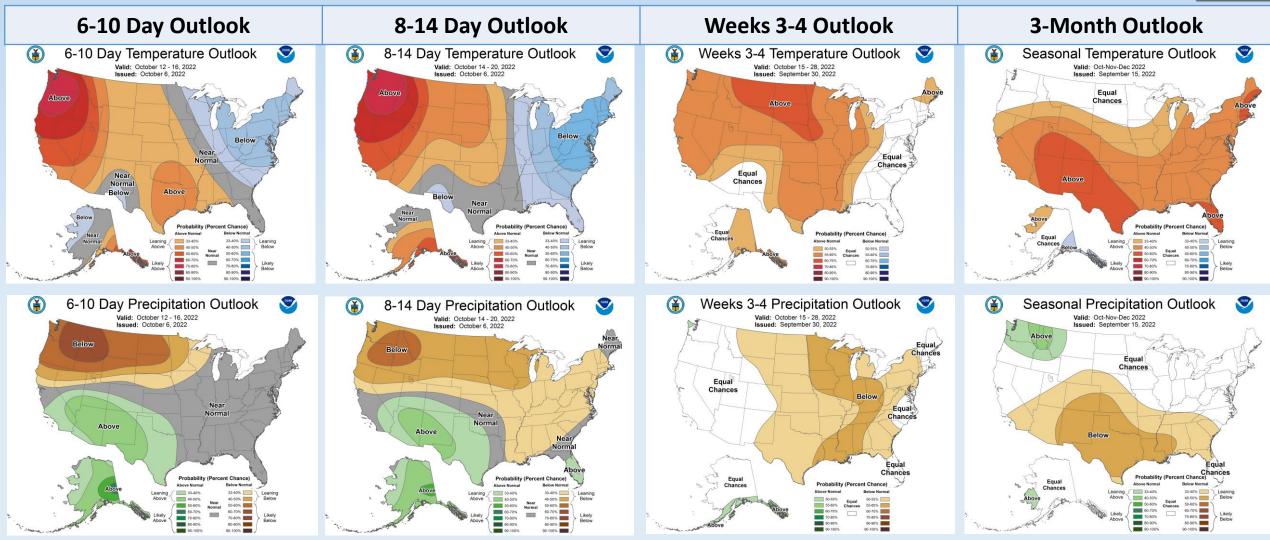




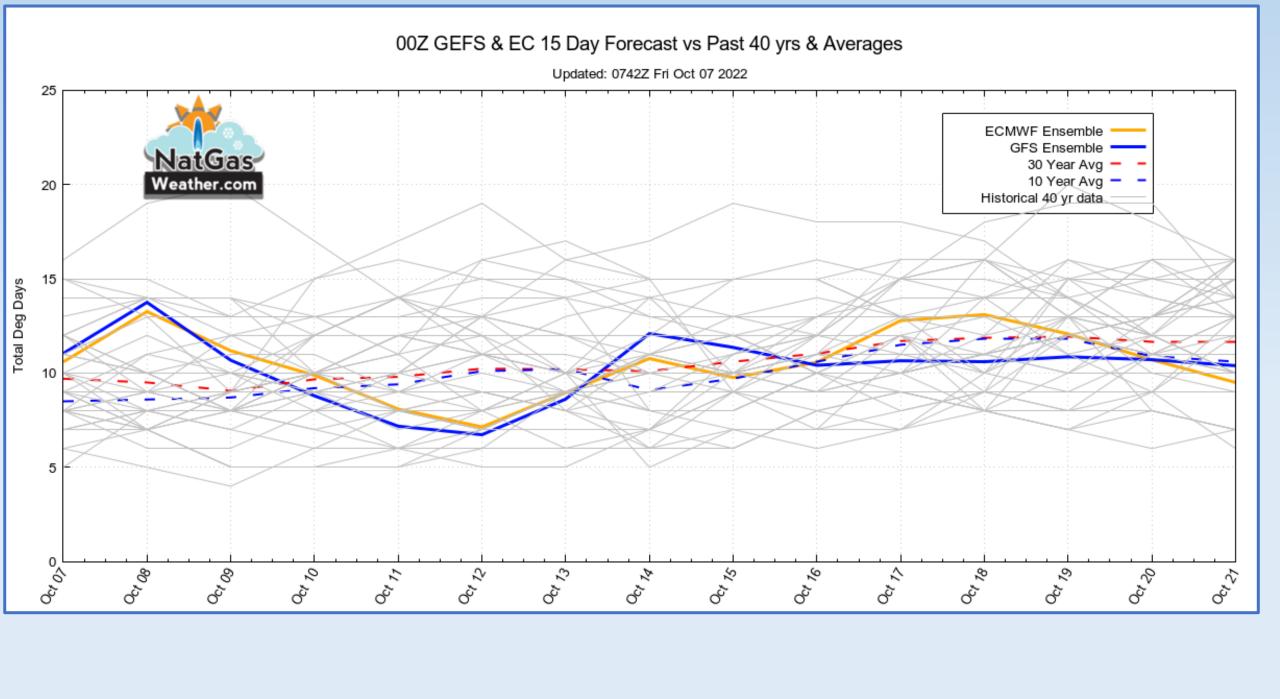


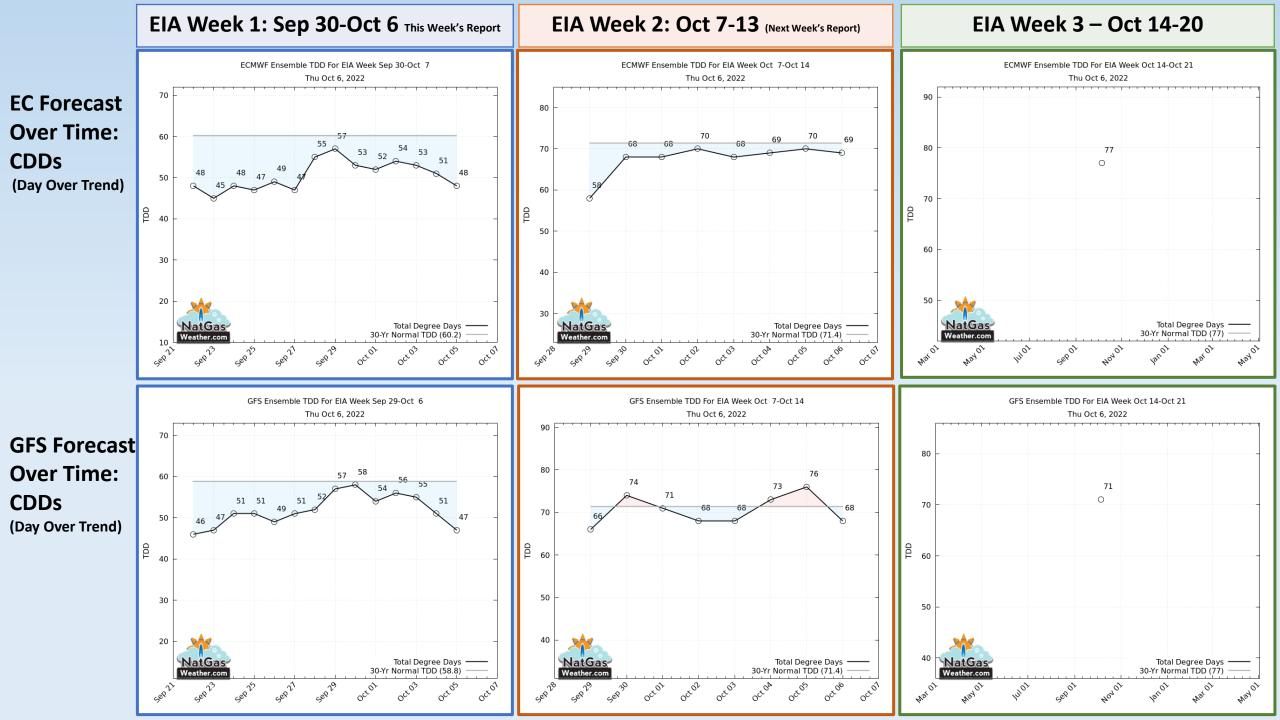
# **NOAA – CPC Temperature & Precipitation Outlooks**



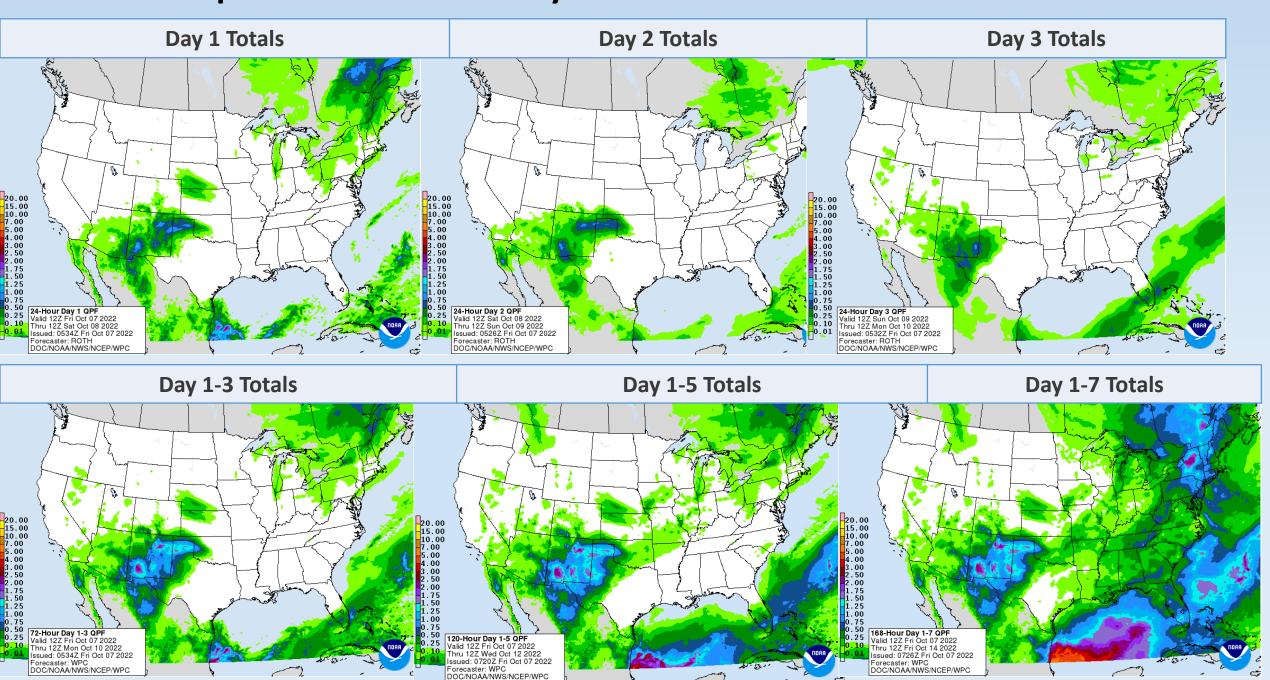


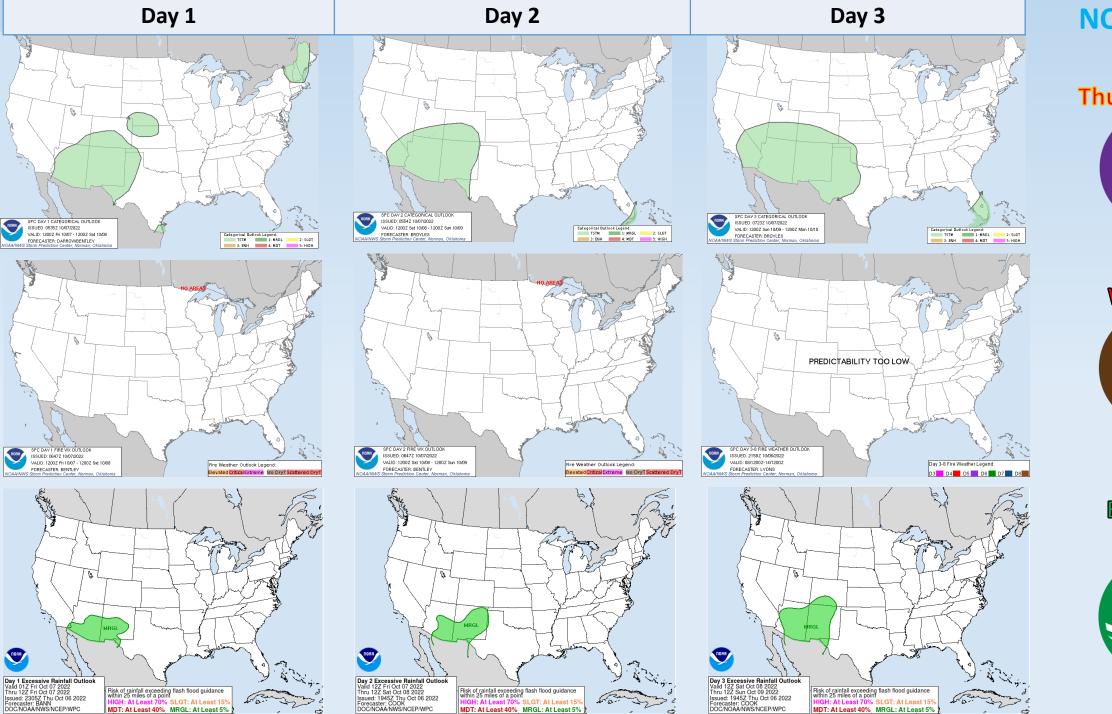






# **NOAA – Precipitation Totals 1-7-Days**





# **NOAA Maps**

Severe Thunderstorms







# **Drought Monitor & Soil Moisture vs Normal**

