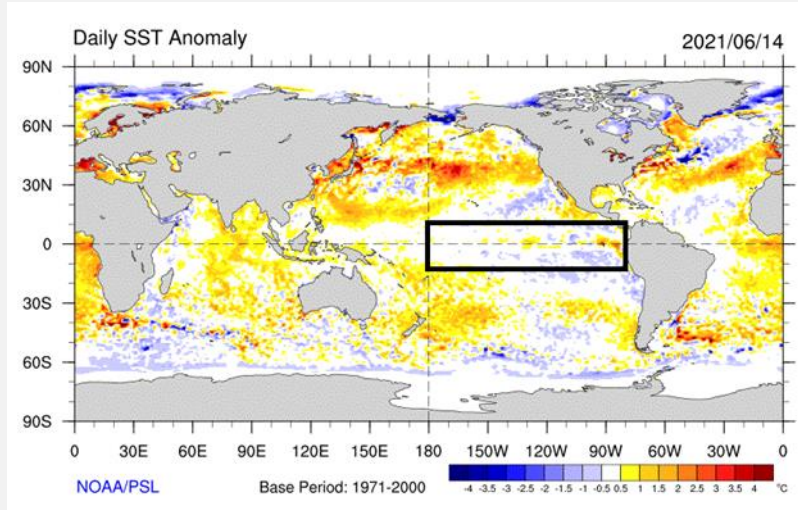


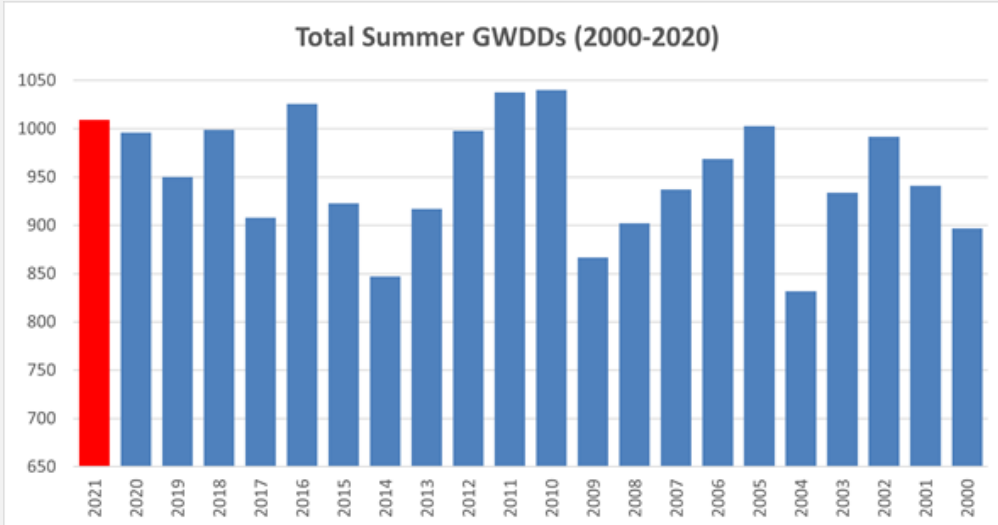
This weekend's commentary comes from **Brian Lovern** at [Bespoke Weather](#).

Our expectation remains for another hot summer this year, and we have definitely gotten off to a hotter start early on, with June being projected to rank in the top three hottest Junes on record, in terms of national demand (GWDDs). This is in spite of the demise of the La Niña state, as sea surface temperatures have shifted to normal in the key ENSO regions, as seen on the map below:

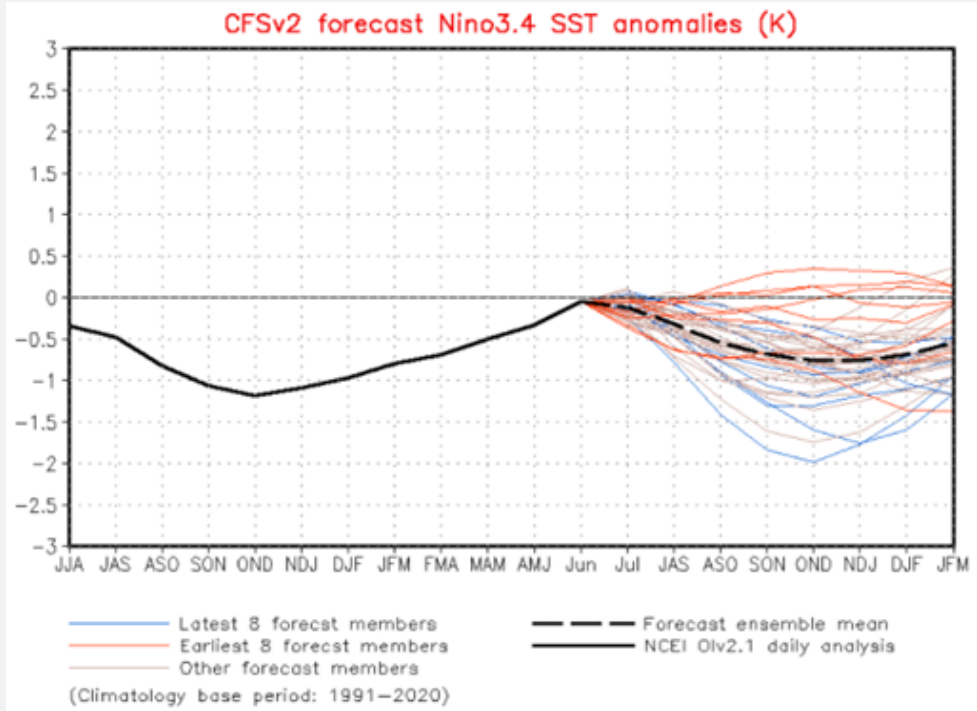
Most Recent Sea-Surface Temperature Anomalies



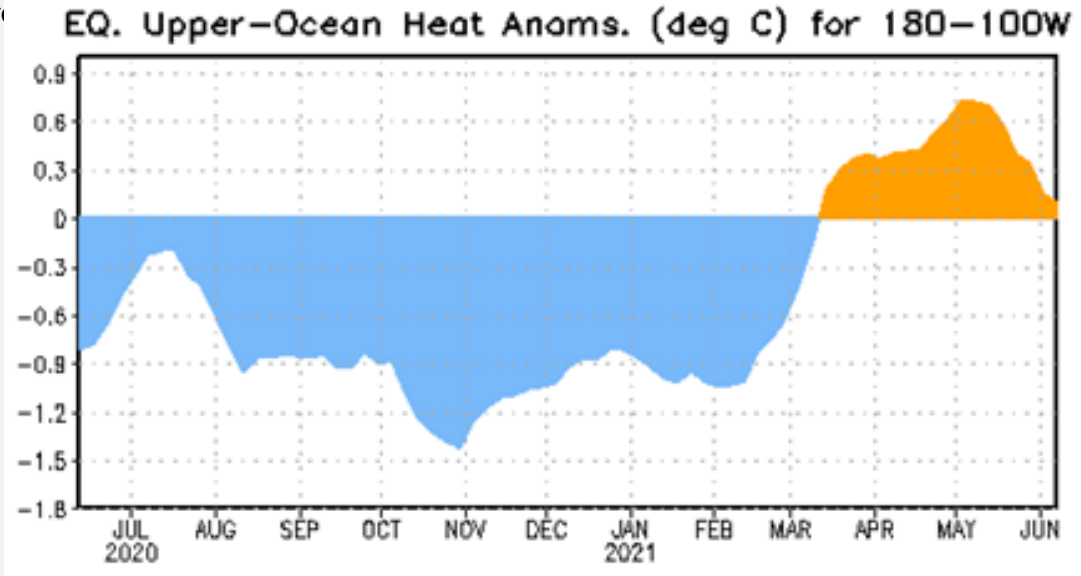
While, over the longer term, summers have been hotter when a La Niña state is present, or when the atmosphere is heading into a La Niña state, that correlation has not been quite as strong over the last decade, as we have tended to run hot no matter what the ENSO state is doing. We believe this is tied into enhanced forcing from the Indian Ocean, which has become more dominant as those waters warm more relative to other parts of the world, and appears to be a factor again this summer. Given the hotter June, we have bumped our summer (June-August) GWDD forecast to 1010, behind only 2010, 2011, and 2016 in our historical record, and those could be challenged if July and August follow June's lead.



Now, the CFS does show the potential for La Niña conditions to return later this year, but would be more of a factor toward autumn and next winter if this forecast comes to fruition. This would pose warmer risks as we move through autumn, so is something to keep in the back of your mind once we wade through the summer heat.



Upper oceanic heat content in the equatorial Pacific appears to have peaked in early May, and is near neutral currently.



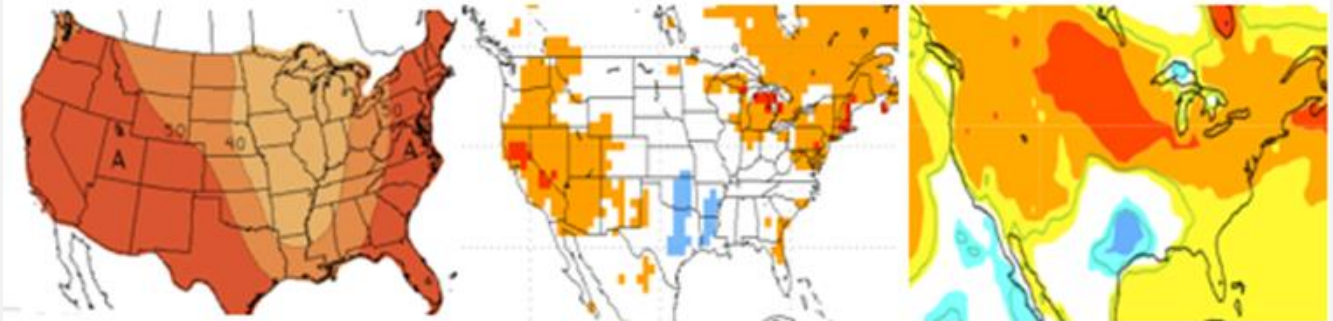
In terms of the primary long-range models, and CPC's guidance, there is agreement on the hotter overall view, though the CFS and the ECMWF are cooler toward Texas. While June did start cooler there due to all of the rain, both models may be too cool, as things have dried out, and recent temperatures have over-performed vs what has been forecast, so we would remove any "blues" there. In short, support remains strong in favoring a hot summer once again, especially considering the hot start here in June.

3-Month Weather Outlooks (June-August)

CPC

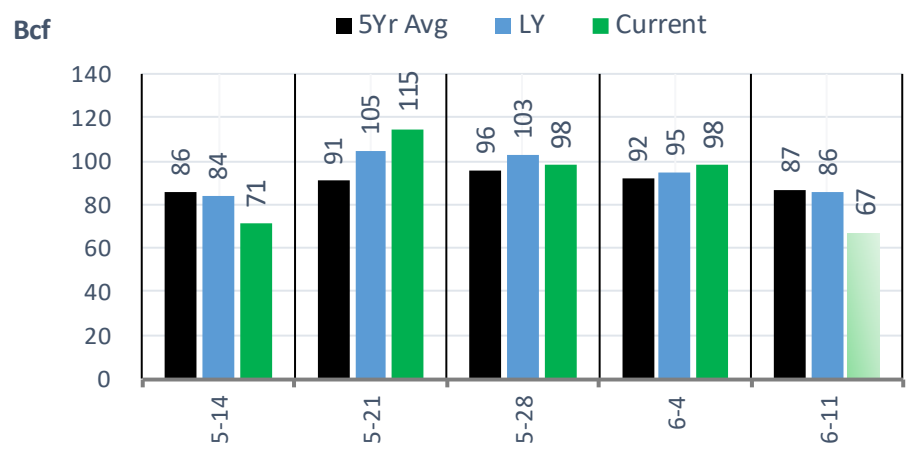
CFS

ECMWF

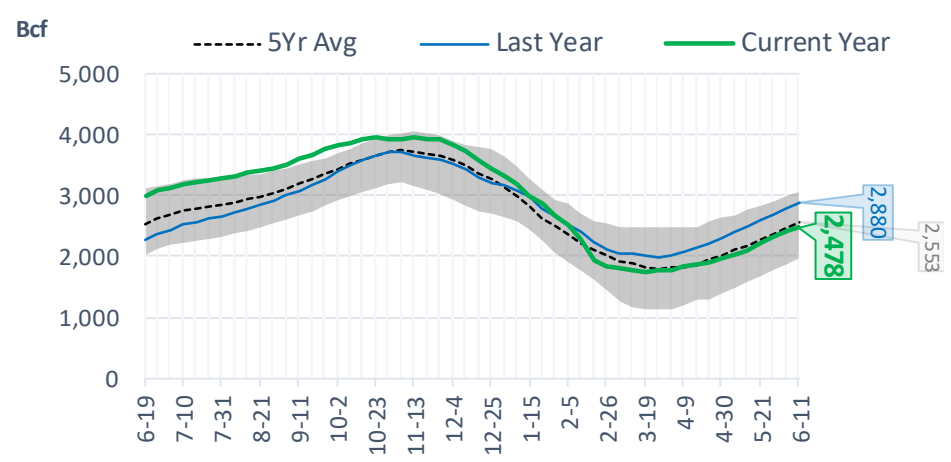


EIA Storage Report

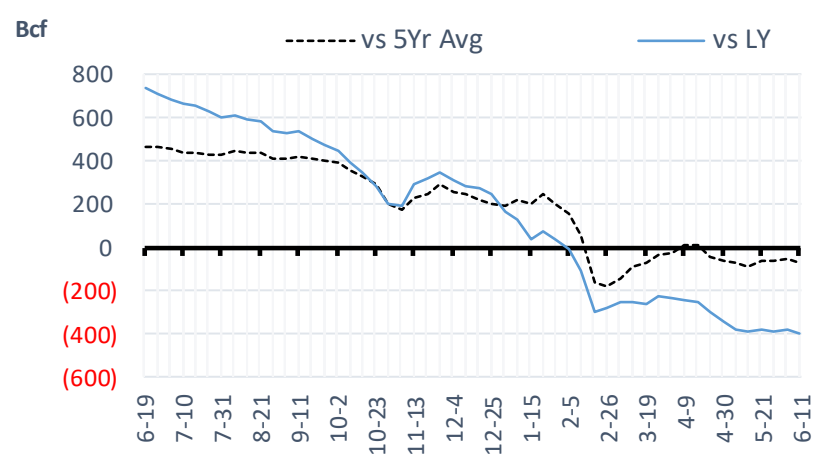
Total Lower 48 YoY Weekly Change



Total Lower 48 Storage Levels



Total Lower 48 LY Surplus/Deficit

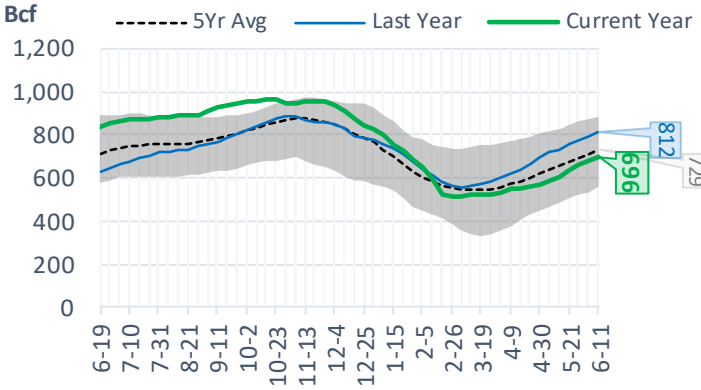


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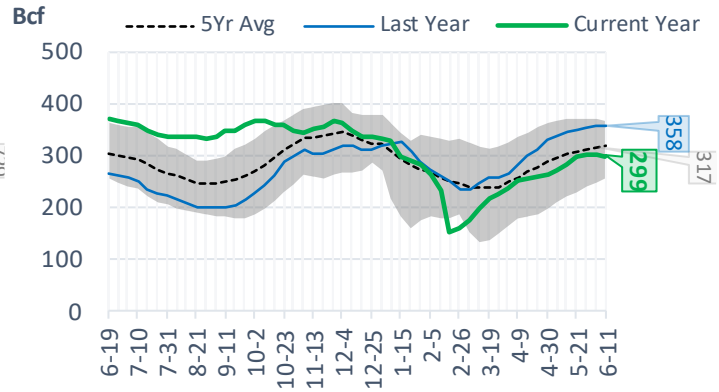
Natural Gas Storage Stats - Last 5 Weeks

Week Ending	Current 11-Jun	Week - 1 4-Jun	Week - 2 28-May	Week - 3 21-May	Week - 4 14-May	Week - 5 7-May
Total Lower 48 Storage Level	2478	2411	2313	2215	2100	2029
Weekly Change	+67	+98	+98	+115	+71	+71
vs LY	-402	-383	-386	-381	-391	-378
vs 5Yr Avg	-75	-55	-61	-63	-87	-72
S. Central Salt Storage Level	299	302	300	296	280	269
Weekly Change	-3	+2	+4	+16	+11	+5
vs LY	-59	-54	-52	-52	-64	-70
vs 5Yr Avg	-18	-13	-12	-12	-24	-28
S. Central NonSalt Storage Level	696	681	659	635	608	588
Weekly Change	+15	+22	+24	+27	+20	+16
vs LY	-116	-113	-116	-119	-126	-128
vs 5Yr Avg	-33	-31	-36	-40	-48	-49
Midwest Storage Level	570	547	522	499	472	458
Weekly Change	+23	+25	+23	+27	+14	+16
vs LY	-114	-111	-108	-103	-101	-93
vs 5Yr Avg	-11	-7	-4	+2	+1	+10
East Storage Level	461	445	413	385	358	347
Weekly Change	+16	+32	+28	+27	+11	+15
vs LY	-122	-114	-118	-114	-109	-101
vs 5Yr Avg	-42	-31	-35	-34	-34	-22
Mountain Storage Level	165	160	151	144	135	131
Weekly Change	+5	+9	+7	+9	+4	+7
vs LY	+10	+13	+12	+13	+12	+15
vs 5Yr Avg	+12	+13	+11	+10	+7	+9
Pacific Storage Level	287	276	268	256	247	235
Weekly Change	+11	+8	+12	+9	+12	+11
vs LY	-2	-4	-4	-6	-4	-3
vs 5Yr Avg	+17	+13	+14	+11	+11	+8

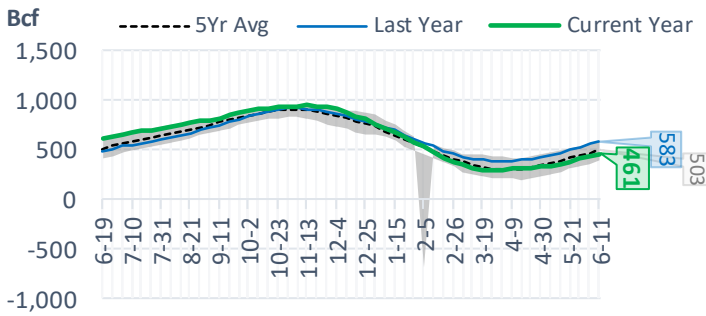
NonSalt Storage Levels



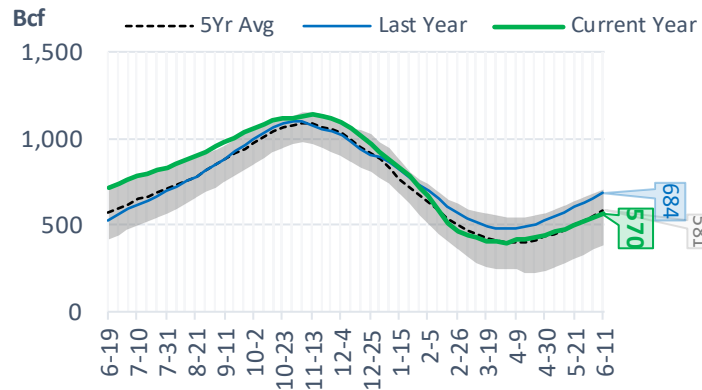
Salt Storage Levels



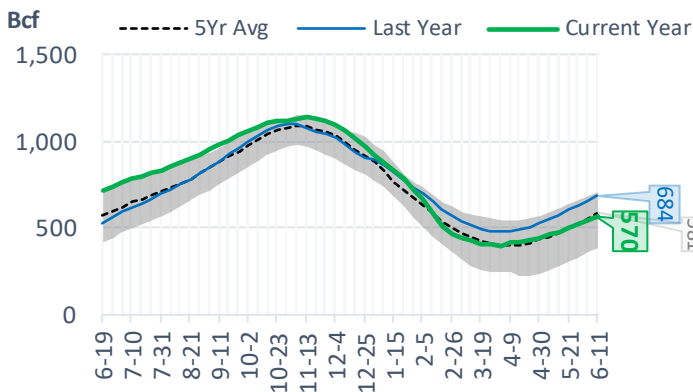
East Storage Levels



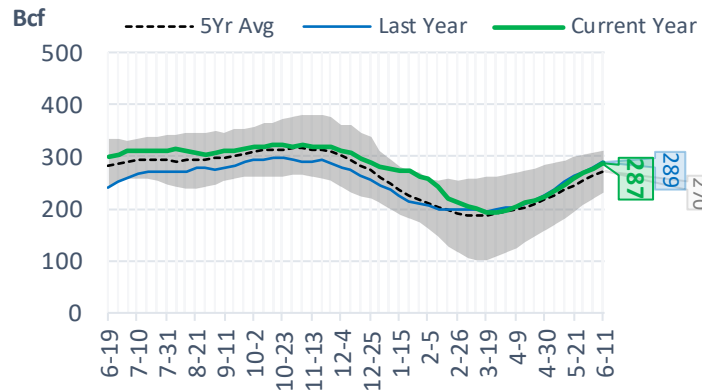
Midwest Storage Levels



Midwest Storage Levels



Pacific Storage Levels



EIA Storage Week Balances

	14-May	21-May	28-May	4-Jun	11-Jun	18-Jun	WoW	vs. 4W
Lower 48 Dry Production	91.8	91.7	92.4	92.2	92.6	91.9	▼ -0.7	▼ -0.3
Canadian Imports	4.8	4.6	4.5	3.9	4.8	5.1	▲ 0.3	▲ 0.7
L48 Power	26.1	26.5	29.5	27.8	34.5	34.9	▲ 0.5	▲ 5.3
L48 Residential & Commercial	18.2	10.5	9.4	11.7	8.4	8.1	▼ -0.2	▼ -1.9
L48 Industrial	18.0	20.0	20.1	18.0	20.7	21.8	▲ 1.1	▲ 2.1
L48 Lease and Plant Fuel	5.0	5.0	5.1	5.1	5.1	5.1	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.3	1.9	2.0	2.0	2.1	2.1	▲ 0.0	▲ 0.1
L48 Regional Gas Consumption	69.5	63.9	66.0	64.6	70.8	72.1	▲ 1.3	▲ 5.7
Net LNG Exports	11.0	10.4	10.5	11.0	9.4	9.6	▲ 0.1	▼ -0.8
Total Mexican Exports	6.8	6.8	6.7	7.2	7.3	7.5	▲ 0.2	▲ 0.5
Implied Daily Storage Activity	9.3	15.2	13.6	13.3	9.9	7.9	-2.0	
EIA Reported Daily Storage Activity	10.1	16.4	14.0	14.0	2.3			
Daily Model Error	-0.9	-1.2	-0.4	-0.7	7.6			

Monthly Balances

	2Yr Ago Jun-19	LY Jun-20	Feb-21	Mar-21	Apr-21	May-21	MTD Jun-21	MoM	vs. LY
Lower 48 Dry Production	91.5	87.7	85.2	91.8	91.7	91.9	92.3	▲ 0.4	▲ 0.5
Canadian Imports	4.7	4.0	6.3	4.8	4.7	4.5	4.8	▲ 0.3	▲ 0.1
L48 Power	33.1	35.0	27.8	24.2	25.0	27.0	34.2	▲ 7.2	▲ 10.0
L48 Residential & Commercial	9.0	8.8	47.1	29.3	20.0	13.1	8.2	▼ -4.8	▼ -21.1
L48 Industrial	22.5	19.9	21.3	19.7	20.5	19.3	20.7	▲ 1.5	▲ 1.0
L48 Lease and Plant Fuel	5.0	4.8	4.7	5.0	5.0	5.0	5.1	▲ 0.1	▲ 0.1
L48 Pipeline Distribution	2.1	2.2	3.3	2.5	2.2	2.1	2.1	▲ 0.0	▼ -0.5
L48 Regional Gas Consumption	71.7	70.7	104.1	80.9	72.8	66.5	70.4	▲ 3.9	▼ -10.5
Net LNG Exports	5.5	4.0	8.6	11.1	11.5	10.8	9.8	▼ -1.0	▼ -1.4
Total Mexican Exports	5.2	5.5	5.8	6.5	6.7	6.8	7.4	▲ 0.7	▲ 1.0
Implied Daily Storage Activity	13.8	11.5	-27.0	-2.0	5.4	12.4	9.5		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

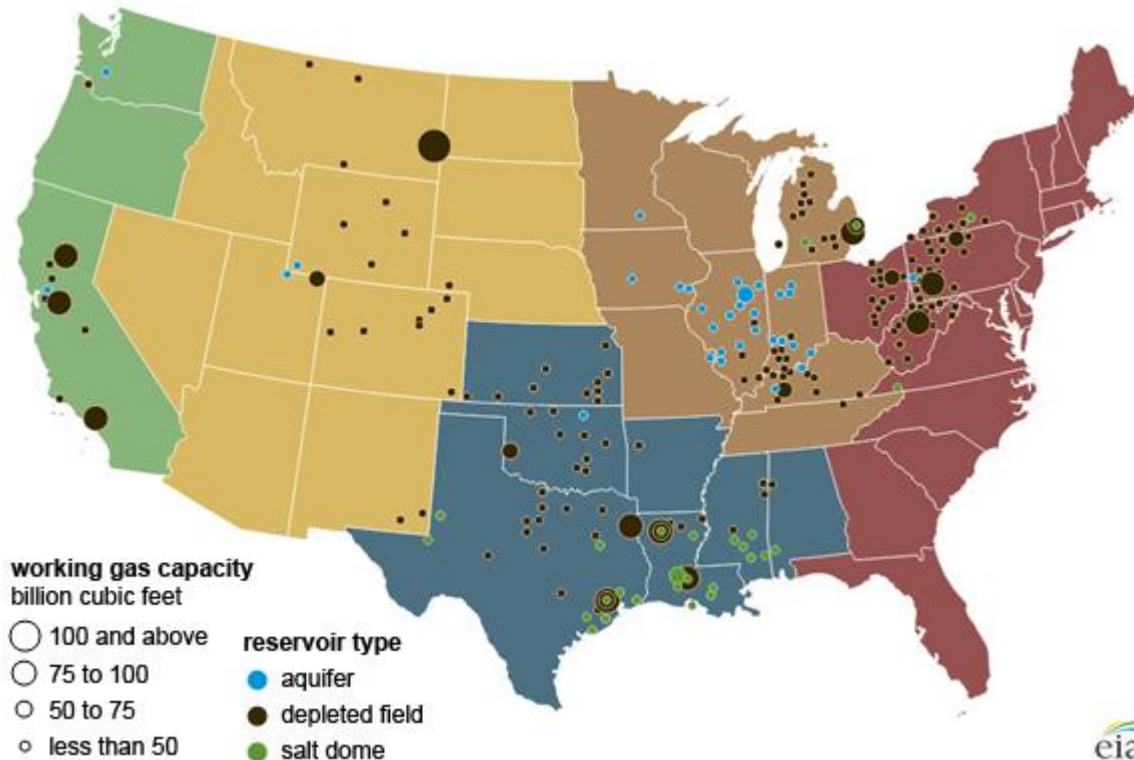
Regional S/D Models Storage Projection

Week Ending 18-Jun

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	7.6	0.5	8.1	57
East	3.4	0.6	4.0	28
Midwest	3.8	-0.9	3.0	21
Mountain	4.6	-3.7	1.0	7
South Central	-5.0	4.5	-0.4	-3
Pacific	0.7	-0.1	0.5	4

*Adjustment Factor is calculated based on historical regional deltas

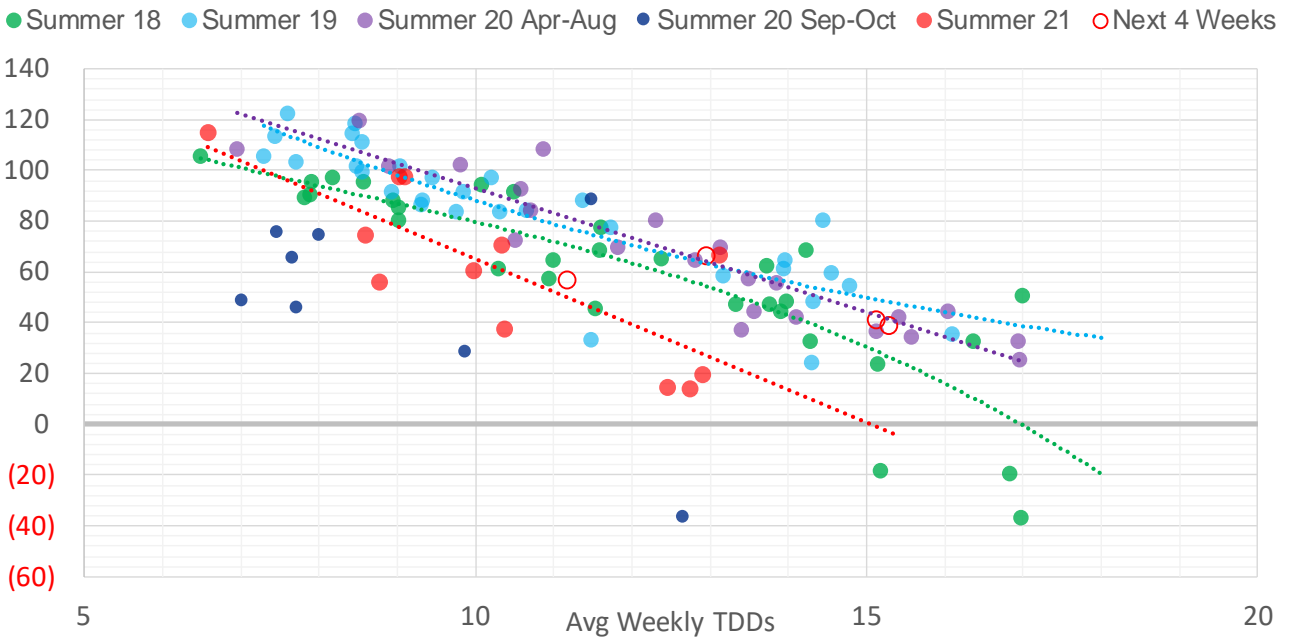
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

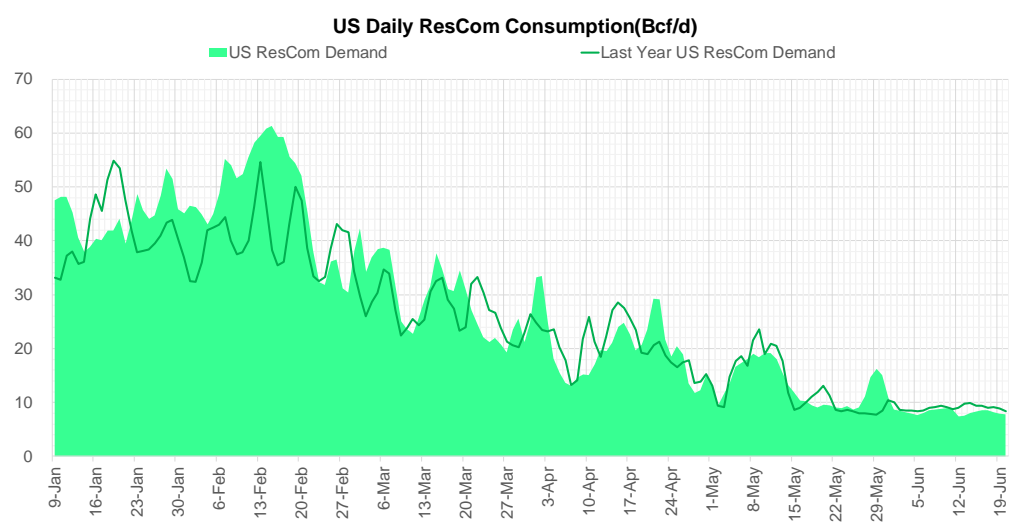
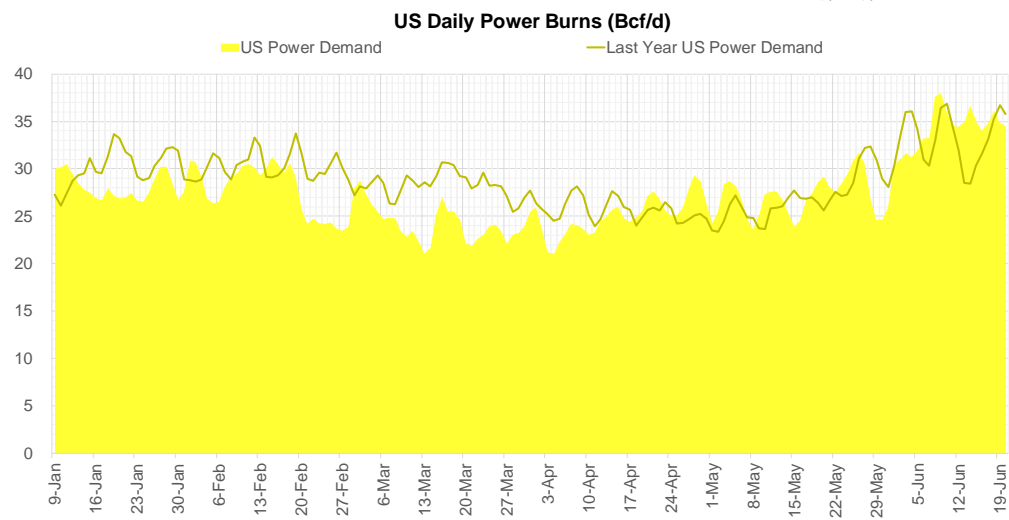
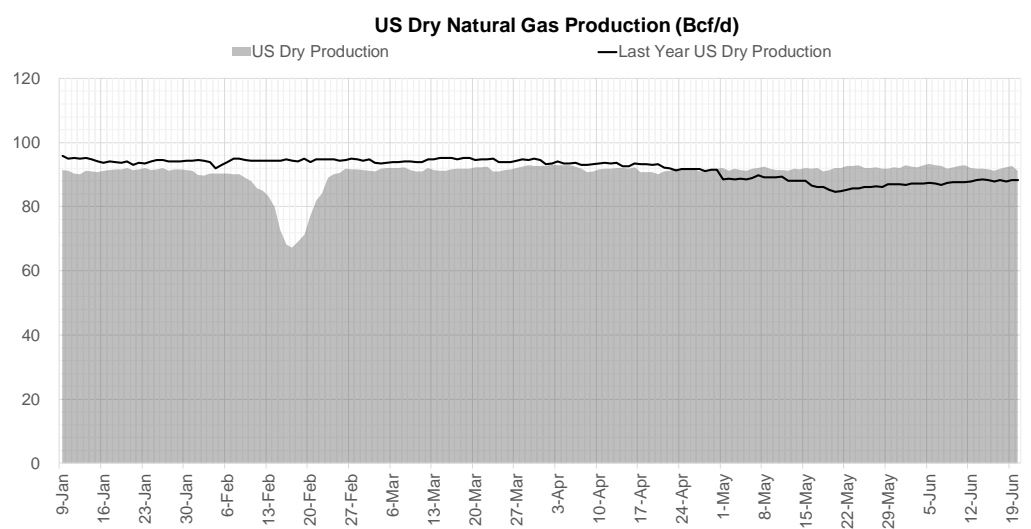
Next report and beyond		
Week Ending	Temp	Week Storage Projection
25-Jun	13.0	66
02-Jul	15.1	41
09-Jul	15.3	39

Weather Storage Model - Next 4 Week Forecast



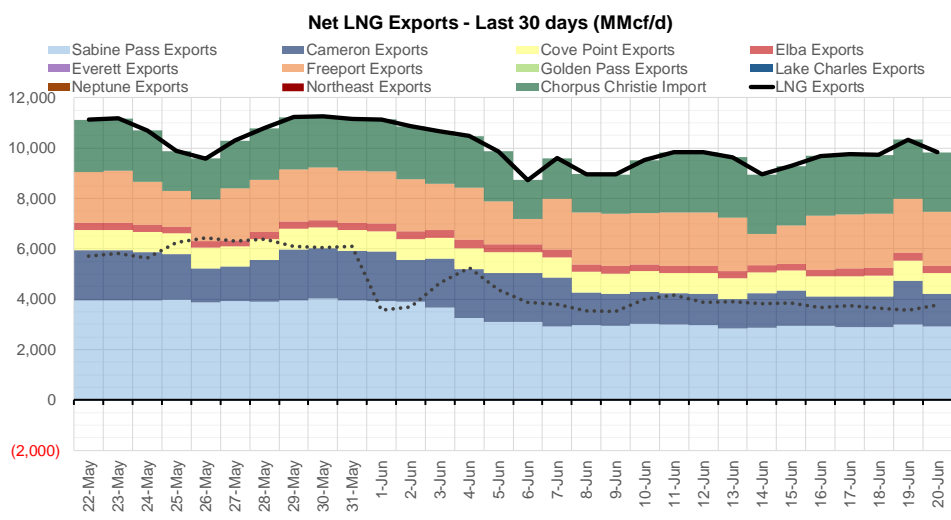
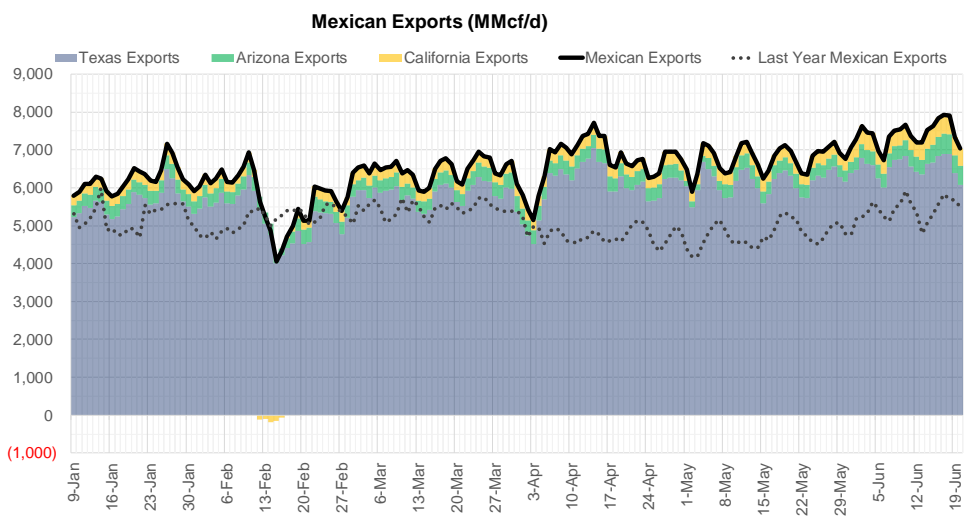
Note: this is not our official end of season forecast. This chart signifies where storage levels end with 10-year normal weather and current market tightness relative to last year

Supply – Demand Trends



Source: Bloomberg

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Source: Bloomberg

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Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

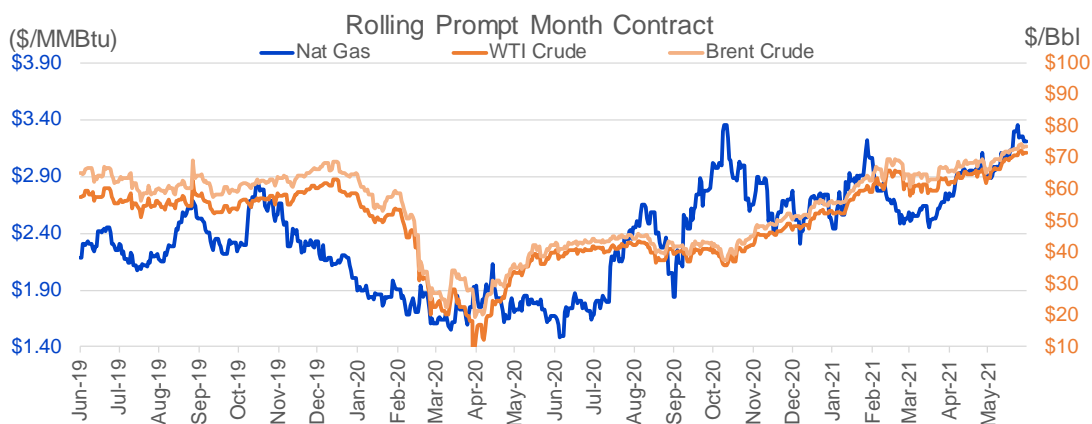
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
7	2021	C	3.50	14849	10	2021	C	4.00	46170
8	2021	C	3.30	9752	9	2021	C	4.00	41272
8	2021	C	4.00	9251	8	2021	C	3.50	39166
8	2021	C	3.50	8518	8	2021	C	4.00	37971
7	2021	C	3.25	8343	7	2021	C	3.50	37479
7	2021	P	3.00	5736	10	2021	P	2.50	33724
8	2021	C	3.75	5732	10	2021	C	3.50	33614
7	2021	P	2.95	4714	8	2021	P	3.00	30764
7	2021	P	2.85	4418	7	2021	P	2.90	30094
7	2021	C	3.35	3954	8	2021	P	2.50	29374
7	2021	C	3.70	3192	7	2021	C	3.25	29153
9	2021	C	3.50	3175	10	2021	C	3.25	28823
7	2021	P	3.10	2905	7	2021	P	2.50	28794
8	2021	C	3.40	2790	7	2021	C	4.00	28471
9	2021	C	3.40	2751	10	2021	C	5.00	28351
12	2021	C	4.00	2707	8	2021	P	2.90	28062
7	2021	P	3.15	2603	8	2021	C	3.25	26465
9	2021	C	4.25	2502	9	2021	C	3.50	26461
7	2021	C	3.40	2472	7	2021	P	2.75	26182
8	2021	C	3.25	2392	7	2021	P	3.00	25260
8	2021	P	3.00	1984	10	2021	P	2.75	24594
9	2021	P	3.00	1913	9	2021	P	2.50	24000
8	2021	P	2.60	1871	7	2021	P	2.85	23541
7	2021	P	3.05	1794	8	2021	C	3.75	23507
12	2021	C	5.00	1525	12	2021	C	4.00	23336
11	2021	C	5.00	1500	7	2021	P	2.80	23071
7	2021	C	3.60	1493	10	2021	P	2.00	22836
7	2021	P	2.90	1310	7	2021	C	3.00	21977
8	2021	P	3.30	1221	7	2021	C	3.75	21953
10	2021	C	3.75	1200	9	2021	P	2.00	20423
10	2021	P	3.00	1200	8	2021	P	2.75	20023
7	2021	P	3.25	1027	9	2021	C	3.25	19882
10	2021	P	2.50	1027	8	2021	P	2.00	19664
10	2021	C	5.00	1010	4	2022	C	3.00	19598
8	2021	P	2.55	1000	8	2021	P	2.25	19478
10	2021	P	2.25	1000	10	2021	C	4.50	19198
7	2021	C	3.45	832	10	2021	P	2.25	18463
7	2021	C	3.00	790	10	2021	C	3.00	18010
8	2021	P	3.10	779	11	2021	C	4.00	17844
9	2021	C	3.25	727	3	2022	C	4.00	16900
10	2021	P	3.25	650	8	2021	C	3.00	16071
9	2021	P	3.25	640	7	2021	P	2.00	16035
7	2021	P	3.20	607	11	2021	P	2.50	15470
10	2021	C	6.00	517	7	2021	P	2.70	15371
7	2021	C	3.75	507	3	2022	C	3.00	15293
9	2021	C	4.00	503	10	2021	C	6.00	14164
9	2021	C	3.75	452	3	2022	C	5.00	14101
10	2021	P	2.75	452	12	2021	P	2.00	13884
8	2021	P	3.25	430	7	2021	C	3.15	13833
					9	2021	P	1.9	13732

Source: CME, Nasdaq, ICE

Nat Gas Futures Open Interest CME, ICE and Nasdaq Combined

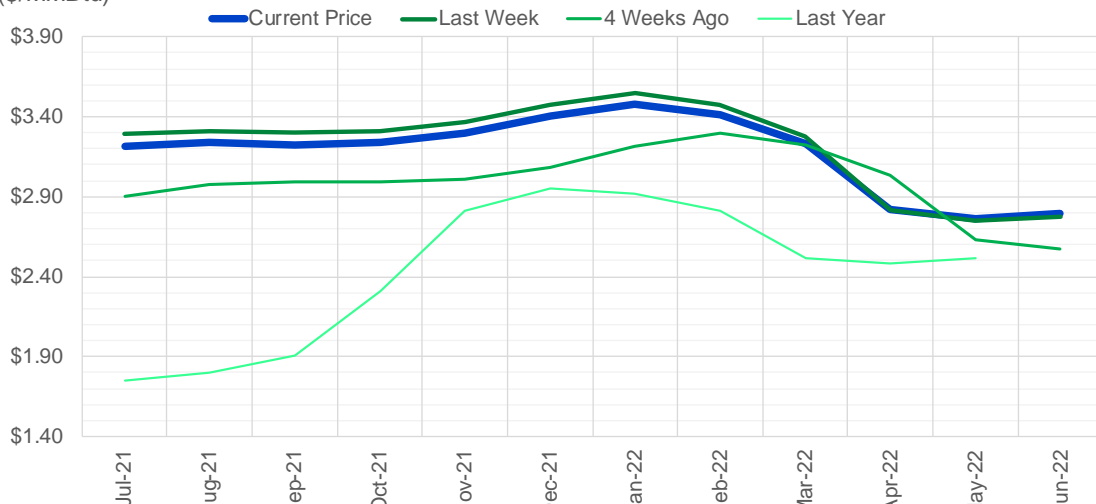
CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MM			
	Current	Prior	Daily Change		Current	Prior	Daily Change
JUL 21	90099	115593	-25494	JUL 21	89753	90666	-913
AUG 21	184714	177823	6891	AUG 21	80176	80131	45
SEP 21	201662	201139	523	SEP 21	84062	83435	627
OCT 21	145040	145869	-829	OCT 21	99655	100133	-478
NOV 21	91501	90274	1227	NOV 21	70595	70475	120
DEC 21	64057	63963	94	DEC 21	67721	67674	47
JAN 22	92161	91626	535	JAN 22	84447	84267	179
FEB 22	38364	37987	377	FEB 22	65212	64882	331
MAR 22	82848	83106	-258	MAR 22	64540	65045	-506
APR 22	77641	77847	-206	APR 22	57955	57196	759
MAY 22	50255	50097	158	MAY 22	53960	53948	12
JUN 22	23425	23716	-291	JUN 22	50445	50190	255
JUL 22	15784	15947	-163	JUL 22	48615	48361	254
AUG 22	16962	17030	-68	AUG 22	49064	48801	263
SEP 22	15122	14751	371	SEP 22	49144	49331	-188
OCT 22	45613	44855	758	OCT 22	55699	54907	792
NOV 22	17821	16695	1126	NOV 22	43217	42931	287
DEC 22	12680	12579	101	DEC 22	46673	46616	57
JAN 23	7861	7949	-88	JAN 23	25744	25792	-48
FEB 23	2838	2841	-3	FEB 23	23486	23485	1
MAR 23	7077	6959	118	MAR 23	26617	26383	234
APR 23	8432	8240	192	APR 23	21135	21471	-336
MAY 23	4531	4530	1	MAY 23	21239	21229	10
JUN 23	1082	1082	0	JUN 23	19764	19753	12
JUL 23	1785	1785	0	JUL 23	19634	19651	-18
AUG 23	880	880	0	AUG 23	19620	19653	-33
SEP 23	1016	1006	10	SEP 23	19180	19188	-9
OCT 23	2320	2295	25	OCT 23	20090	20076	14
NOV 23	802	801	1	NOV 23	18883	18959	-77
DEC 23	1133	1134	-1	DEC 23	19481	19560	-79

Source: CME, ICE



(\$/MMBtu)

Nat Gas Term Structure




	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Current Price	\$3.215	\$3.236	\$3.222	\$3.237	\$3.294	\$3.401	\$3.478	\$3.412	\$3.234	\$2.823	\$2.762	\$2.792
Last Week	\$3.296	\$3.311	\$3.301	\$3.314	\$3.369	\$3.472	\$3.549	\$3.476	\$3.280	\$2.817	\$2.748	\$2.774
vs. Last Week	-\$0.081	-\$0.075	-\$0.079	-\$0.077	-\$0.075	-\$0.071	-\$0.071	-\$0.064	-\$0.046	\$0.006	\$0.014	\$0.018
4 Weeks Ago	\$2.906	\$2.977	\$2.996	\$2.993	\$3.013	\$3.087	\$3.215	\$3.295	\$3.225	\$3.031	\$2.631	\$2.576
vs. 4 Weeks Ago	\$0.309	\$0.259	\$0.226	\$0.244	\$0.281	\$0.314	\$0.263	\$0.117	\$0.009	-\$0.208	\$0.131	\$0.216
Last Year	\$1.669	\$1.748	\$1.799	\$1.904	\$2.312	\$2.810	\$2.951	\$2.920	\$2.810	\$2.517	\$2.484	\$2.517
vs. Last Year	\$1.546	\$1.488	\$1.423	\$1.333	\$0.982	\$0.591	\$0.527	\$0.492	\$0.424	\$0.306	\$0.278	\$0.275

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.022	▲ 0.004	▼ -0.014	▲ 0.013
NatGas Oct21/Nov21	\$/MMBtu	0.057	▲ 0.002	▼ -0.017	▲ 0.015
NatGas Oct21/Jan22	\$/MMBtu	0.241	▲ 0.006	▼ -0.041	▼ -0.026
NatGas Apr22/Oct22	\$/MMBtu	0.030	▲ 0.018	▲ 0.001	▼ -0.019
WTI Crude	\$/Bbl	71.64	▲ 0.730	▲ 8.060	▲ 31.890
Brent Crude	\$/Bbl	73.51	▲ 0.820	▲ 7.070	▲ 31.320
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	209.32	▼ -2.750	▲ 10.500	▲ 88.180
Propane, Mt. Bel	cents/Gallon	0.95	▲ 0.011	▲ 0.138	▲ 0.447
Ethane, Mt. Bel	cents/Gallon	0.28	▼ -0.001	▲ 0.017	▲ 0.052
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000
Coal, PRB	\$/MMBtu	0.70			

Source: CME, Bloomberg

Baker Hughes Rig Counts

Rotary Rig Count					
6/18/2021					
Baker Hughes 					
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	373	8	365	184	189
Gas	97	1	96	22	75
Miscellaneous	0	0	0	-2	2
Directional	25	1	24	7	18
Horizontal	425	5	420	191	234
Vertical	20	3	17	6	14
Canada Breakout	This Week	+/-	Last Week	+/-	Year Ago
Oil	74	15	59	69	5
Gas	43	9	34	31	12
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
Ardmore Woodford	2	0	2	1	1
Arkoma Woodford	1	0	1	1	0
Barnett	1	0	1	-1	2
Cana Woodford	15	0	15	10	5
DJ-Niobrara	9	3	6	4	5
Eagle Ford	32	-1	33	21	11
Granite Wash	2	1	1	2	0
Haynesville	49	0	49	17	32
Marcellus	27	-1	28	0	27
Permian	237	1	236	105	132
Utica	9	1	8	0	9
Williston	17	1	16	7	10