



Item 4.1: CEO Update – Revised 08.07.2018

Bill Magness
President & CEO
ERCOT

Board of Directors Meeting

ERCOT Public
August 7, 2018

CEO Update: Variance to Budget (\$ in Millions) Net Revenues After Department Expenditures

Net Revenues Year to Date Actuals: \$16.7 M Favorable *(as of June 30, 2018)*

Highlighted Revenue Variances

\$4.2 M over budget: interest income due to higher investment balance and rates

\$5.0 M over budget: system administration fees due to weather and stronger economy

\$0.8 M over budget: interconnection revenue

Highlighted Expenditure Variances

\$0.0 M variance to budget: resource management (\$-1.3 M staffing management; \$1.3 M project work)

\$0.8 M under budget: HW/SW support and maintenance renewals

\$4.1 M under budget: timing differences

Net Revenues Year End Forecast: \$19.8 M Favorable *(as of July 25, 2018)*

Highlighted Revenue Variances

\$9.1 M over budget: interest income due to higher investment balance and rates

\$7.6 M over budget: system administration fees based on current actuals and load forecast for remainder of year

\$1.2 M over budget: interconnection revenue

Highlighted Expenditure Variances

\$1.0 M over budget: resource management (\$-2.4 M staffing management; \$1.4 M project work)

\$0.8 M under budget: HW/SW support and maintenance renewals



Project Update – Congestion Revenue Rights (CRR)

- Challenges
 - Software quality: number of severity 1 defects
- Mitigation
 - Communication improved at project and executive level
 - Co-location of resources, improved communication and efficiency
 - Two Quality Assurance resources added to the project
 - Executive level subject matter expert added to the project
 - Improved process for managing bug fixes (code lockdowns)
- Outlook
 - Expect to finalize the go-live date in September 2018

Project Update – Credit Monitor and Management (CMM)

- Challenges
 - Design assumptions underestimated complexity
 - Scope changes
 - Establishing new delivery approach
- Mitigation
 - Established an improved process to manage scope changes
 - Improved ability to monitor progress of work
 - Adding additional resource to better coordinate development and business resources
- Outlook
 - Current phase (1b) is reforecasting a revised target date

2018 R4 Release Summary

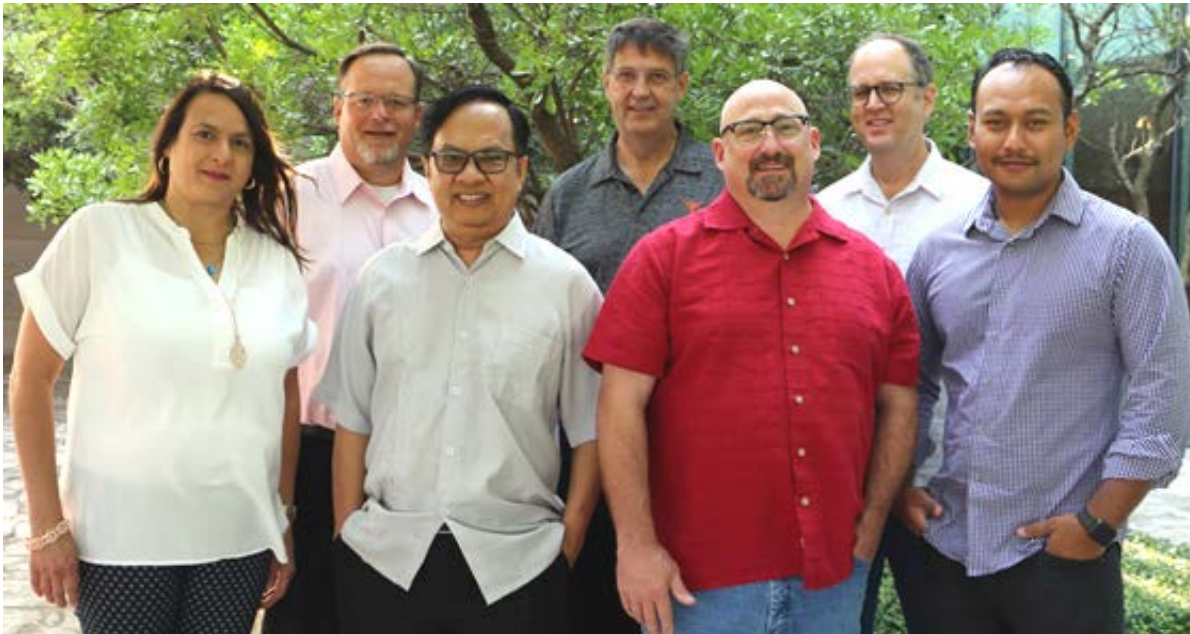
R4 Release Dates: August 7 – 9, 2018

- 98 Change Requests across the application areas
- NPRRs
 - NPRR819: Modification of Non-Price Error Resettlement Thresholds and Resettlement Clean-Ups (not a system change)
 - NPRR844: Clarification to Outage Report
 - NPRR854: NOIE TDSP Submittal of Meters with Bidirectional Flow Caused by Generation Interconnected at Distribution Voltage
 - SCR791: Correction of 60-day SCED GRD Disclosure Report
- R4 impacted functional areas
 - Data and Information Products, Data Management & Governance, Energy Management System, Enterprise Integration Nodal Services, Enterprise Integration Retail Services, Infrastructure, Market Management System, Market Settlements, Outage Scheduling, Retail Operations, Web Communications



Employee Recognition – Test Data Refresh Project

- Test Data Refresh Project improved project quality and efficiency
 - Gives projects up to 12 additional weeks of testing each year
 - Results in better test data
 - Uses a fraction of storage space (flexibility and cost savings)
 - Uses automation instead of manual processes
- DC4 provided the key technology to enable these gains



Pictured (from left):

Michelle Duncan, Randy Eickenhorst, Thomas Duong, Ben Groenewald, Jake Brown, Steve Dahl and Nooresh Bajracharya

Not pictured:

Jeanette Agron, Liz Gutierrez, Ramesh Kaul, Angela Michelsen, Sai Peddineni, Billy Strickland, Venkata Tanguturi and Bhushan Walde

FERC Order Preserves ERCOT Jurisdictional Status

- On March 28, 2018, AEP Energy Partners, Inc. (AEP) requested an order from FERC regarding the flow of power between the ERCOT Region and Mexico over existing connections between the regions.
- On July 26, 2018, FERC granted AEP's request and ordered the provision of transmission services between the ERCOT Region and Mexico over the existing Eagle Pass DC Tie, Laredo VFT and McAllen (Railroad) DC Tie.
- The FERC Order preserves the status quo for ERCOT jurisdiction even if proposed interconnections involving Mexico are completed (e.g., Nogales tie or Baja interconnection to the Mexican national grid).

Summer 2018 So Far: New Peak Records

Peak Demand Record: 73,259* megawatts (MW)

- July 19, 2018, 4-5 p.m.

Weekend Peak Demand Record: 71,444 MW

- Sunday, July 22, 2018, 5-6 p.m.

Winter Peak Demand Record: 65,915 MW

- Jan. 17, 2018, 7-8 a.m.

Wind Generation Records (instantaneous)

- Output: 17,541 MW
 - Feb. 19, 2018, 10:05 p.m.
- Penetration (load served): 54%
 - Oct. 27, 2017, 4 a.m.
 - Total Load = 28,416 MW

**New records are preliminary, subject to change in final settlement*

Recent Monthly Peak Demand Records

2018

- January: 65,915 MW (Jan. 17, 7-8 a.m.)
- May: 67,236 MW (May 29, 4-5 p.m.)
- June: 69,102 MW* (June 27, 4-5 p.m.)
- July: 73,259 MW* (July 19, 4-5 p.m.)

2017

- April: 53,486 MW (April 28, 4-5 p.m.)
- October: 62,333 MW (Oct. 9, 4-5 p.m.)

2016

- August: 71,110 MW (Aug. 11, 4-5 p.m.)
- September: 66,949 MW (Sept. 19, 4-5 p.m.)
- December: 57,932 MW (Dec. 19, 7-8 a.m.)



Statewide Extreme Heat in July

Heat wave gives Texas new July power use record

(Houston Chronicle, July 16, 2018)

As temperatures soar, state breaks power use records this week

(Austin American-Statesman, July 19, 2018)

Texas power use hits record in heat wave, more peaks ahead: ERCOT

(Reuters, July 19, 2018)

Texas sets four consecutive electricity-usage records, and summer is only getting started

(Dallas Morning News, July 18, 2018)

ERCOT shatters demand records as Texas bakes

(RTO Insider, July 22, 2018)



Summer Operations and Weather Updates

- As the ERCOT system moves into its typical peak demand month of August, our experts will report on summer operations and weather.
 - Dan Woodfin, Senior Director, System Operations
 - Kenan Ögelman, Vice President, Commercial Operations
 - Chris Coleman, Senior Meteorologist

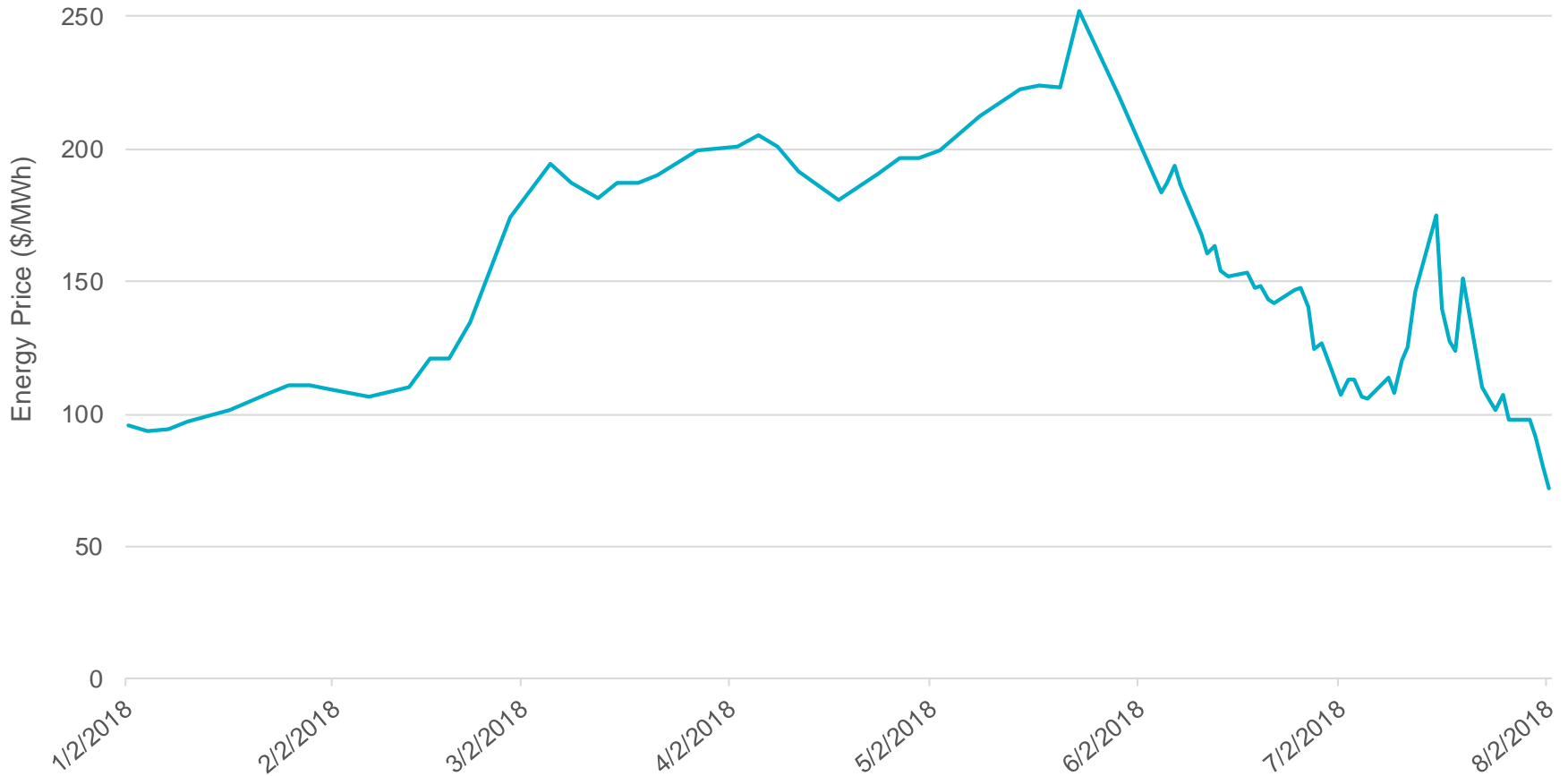


Dan Woodfin

ERCOT Senior Director of System Operations

Kenan Ögelman
ERCOT Vice President of Commercial
Operations

August ERCOT North Hub Real-Time Peak Monthlies (ERN)



Chris Coleman
ERCOT Senior Meteorologist

Summer 2018 Temperature Update **New Slide**

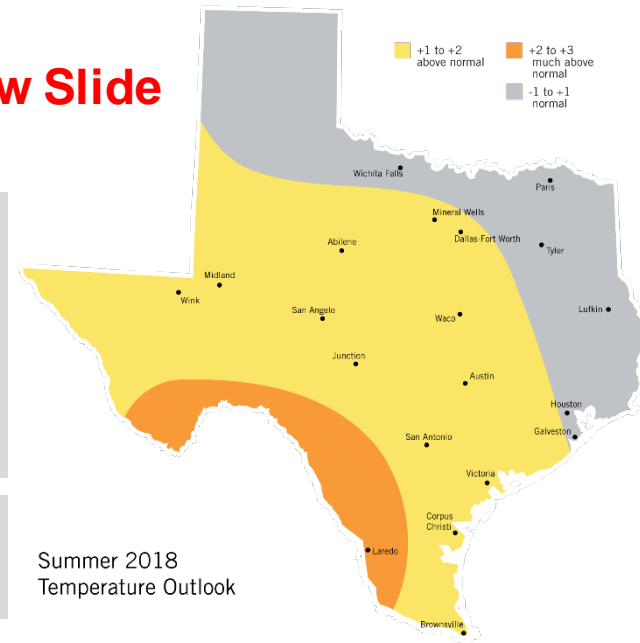
2018 100° days (though 8/2):

Dallas: **21** (LY 10; 2011 71)
 Houston: **4** (LY 1; 2011 46)
 Austin (Mabry): **30** (LY 41; 2011 89)
 San Antonio: **16** (LY 15; 2011 57)

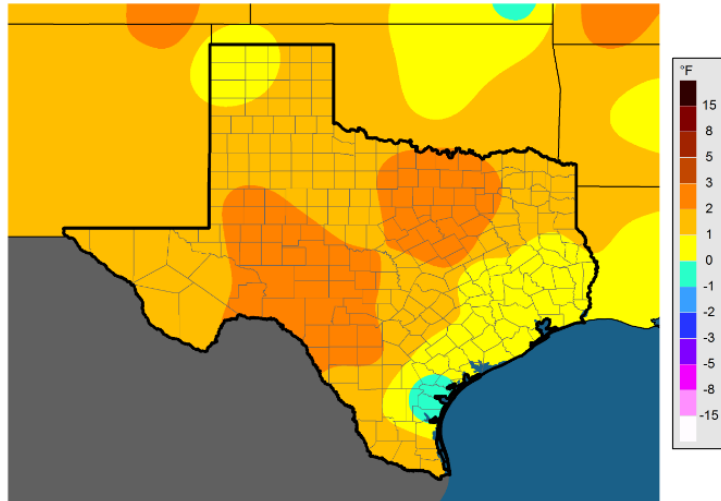
Thu July 19, 2018 (summer peak):

Dallas: **108°** (HI 113) (Sat/Sun 109°)
 Houston: **98°** (HI 106) (Mon 101°)
 Austin: **103°** (HI 104) (Mon 110°)
 San Antonio: **99°** (HI 101) (Mon 105°)

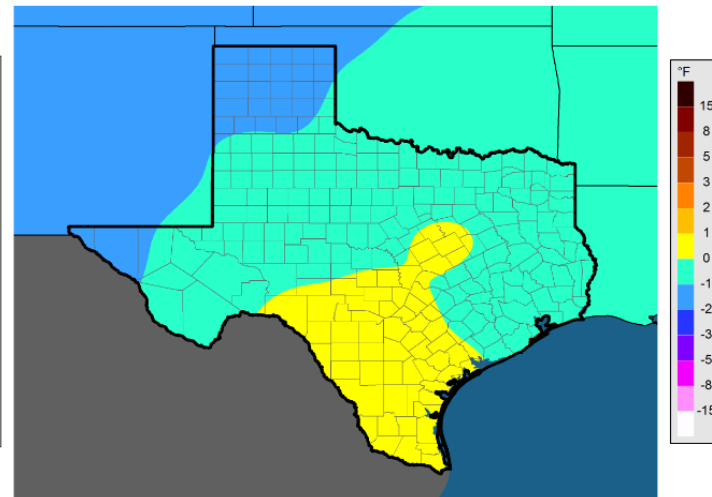
While Houston, Austin, and San Antonio temperatures peaked on Monday, July 23, Dallas dropped to 104 with clouds



Average Temperature (°F) Departure from 20180601 to 20180730 - Ten Year Average



Fifteen Year Avg Temperature Anomaly in °F from 0801 to 0930



While the second-half of the summer will still have above-normal opportunities, they may be more limited than the first-half of the season.

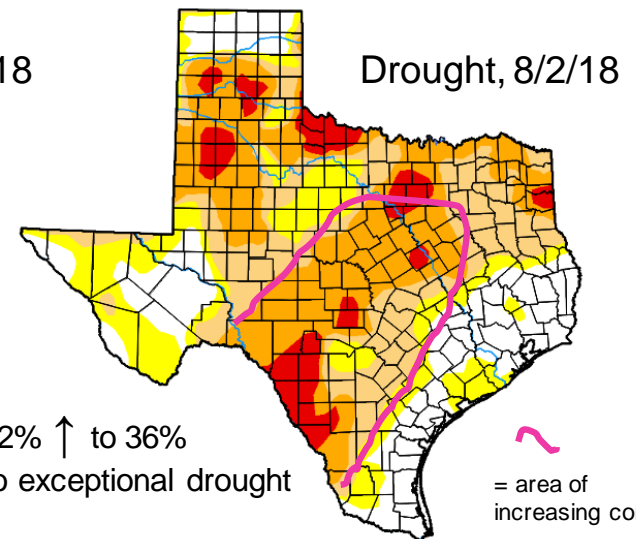
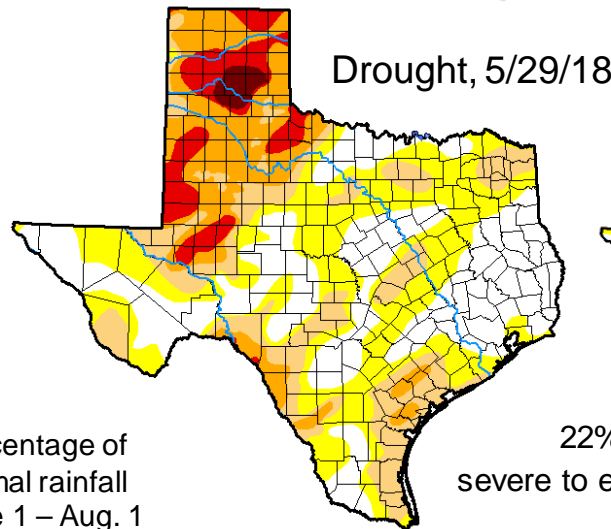
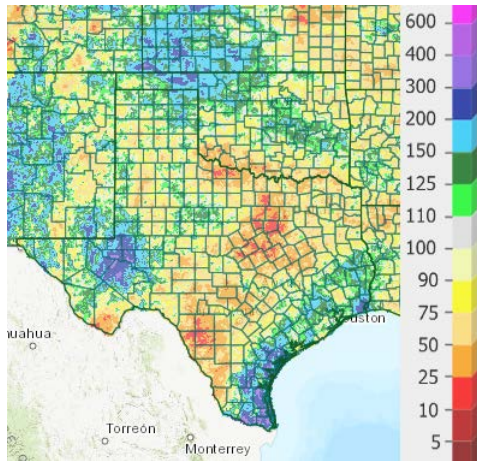
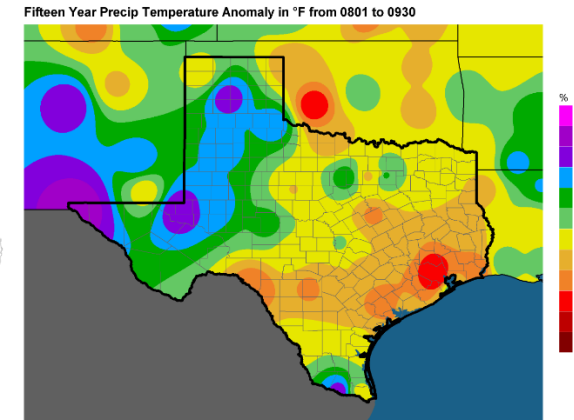
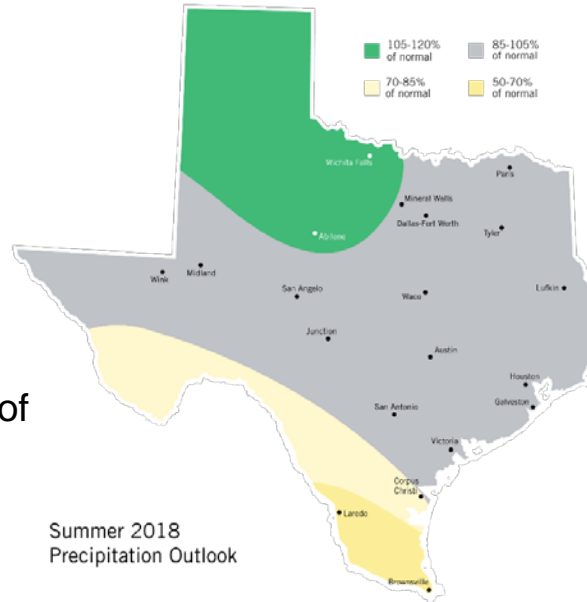
Summer-to-date vs Summer ahead



Summer 2018 Rainfall & Drought Update

New Slide

- While the gray area represents close-to-normal, there is a lean toward below-normal for most of that area (85-105%)
- Opportunities for improvement in the Panhandle and portions of West Texas
- Conditions could worsen in parts of Central, South and Southwest Texas
- Repeat of 2011 is very unlikely – but some regional concerns



Hurricane Update New Slide

2018 Forecast

Original: 11-15 / 5-9 / 3-6

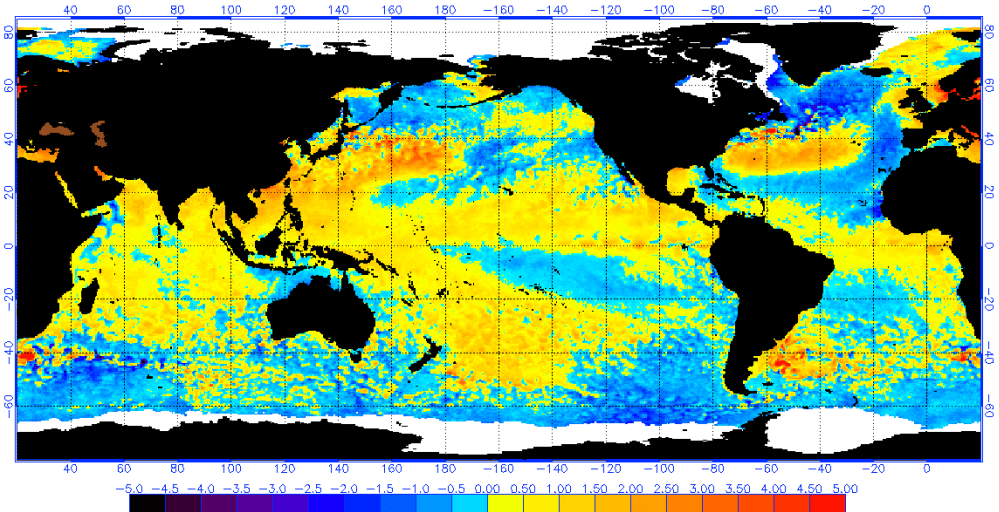
Revised June 27 (on website):
7-12 / 3-6 / 1-3 (low end is more likely)

Current, through 8/2: 3 / 2 / 0

Currently a neutral ENSO, but likely an El Niño by late in the hurricane season

Top impacts on quiet season thus far: below normal temperatures in the Atlantic and frequent Saharan dust

NOAA/NESDIS 50 KM GLOBAL ANALYSIS: SST Anomaly (degrees C), 5/31/2018
(white regions indicate sea-ice)



NOAA/NESDIS 50 KM GLOBAL ANALYSIS: SST Anomaly (degrees C), 7/30/2018
(white regions indicate sea-ice)

