April 2017 Quick Summary

Maximum 30-Day Mean Avg Temperature for Brownsville Area, TX (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	80.5	2011-04-30	0
2	80.1	1967-04-30	0
3	79.8	2006-04-30	0
4	79.1	2012-04-30	0
5	79.0	2002-04-30	0
6	78.7	1929-04-30	0
7	78.6	2017-04-30	0
8	78.5	1963-04-30	0
9	78.4	1922-04-30	0
10	78.1	1894-04-30	0

Period of record: 1878-01-01 to 2017-05-01

Maximum 30-Day Mean Avg Temperature for MCALLEN MILLER INTL AP, TX

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	82.3	2011-04-30	0
2	81.0	2017-04-30	0
3	80.8	1967-04-30	0
4	80.6	1991-04-30	0
5	80.5	1999-04-30	0
6	80.4	1963-04-30	0
7	80.3	2006-04-30	0
8	80.1	2016-04-30	0
9	79.8	2012-04-30	0
10	79.6	2009-04-30	0

Period of record: 1961-01-14 to 2017-05-01

Maximum 30-Day Mean Avg Temperature for RIO GRANDE CITY, TX

Click column heading to sort ascending, click again to sort descending

Rank	Value	Ending Date	Missing Days
1	82.7	1902-05-01	0
2	82.4	1967-05-01	0
3	82.3	1963-05-01	0
4	82.1	1929-05-01	0
5	81.8	2011-05-01	4
6	80.8	2006-05-01	2
7	80.6	2012-05-01	2
8	80.2	1946-05-01	1
9	80.0	1972-05-01	0
10	79.9	2002-05-01	1
11	79.7	1991-05-01	0
12	79.6	1904-05-01	0
13	79.5	1955-05-01	0
14	79.3	1948-05-01	0
15	79.0	1947-05-01	1
16	79.0	1964-05-01	0
17	79.0	1953-05-01	0
18	79.0	1954-05-01	0
-	79.0	1933-05-01	0
20	78.7	1950-05-01	0
21	78.4	1965-05-01	0
22	78.3	1986-05-01	0
23	78.1	1979-05-01	0
24	78.0	1906-05-01	0
25	78.0	1905-05-01	0
26	77.7	2017-05-01	0
-	77.7	1930-05-01	0
28	77.6	2000-05-01	1
29	77.3	2008-05-01	3
30	77.3	1932-05-01	0

Period of record: 1897-01-01 to 2017-05-02

Maximum 30-Day Mean Avg Temperature for HARLINGEN RIO GRANDE AP, TX

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	81.0	2006-05-01	0
2	80.5	2002-05-01	0
3	80.1	2011-05-01	0
4	79.4	2012-05-01	0
5	78.6	2001-05-01	0
6	77.9	2016-05-01	0
7	77.6	1953-05-01	0
8	77.6	2009-05-01	0
9	77.3	1999-05-01	4
10	77.3	1954-05-01	0
11	77.2	2015-05-01	0
12	77.2	1955-05-01	0
13	77.1	2017-05-01	0
14	76.6	2008-05-01	0
15	76.1	2000-05-01	0
16	75.8	1958-05-01	0
17	75.3	2003-05-01	0
18	75.0	1957-05-01	0
19	74.7	1962-05-01	0
20	74.5	2010-05-01	0

Period of record: 1952-07-15 to 2017-05-01

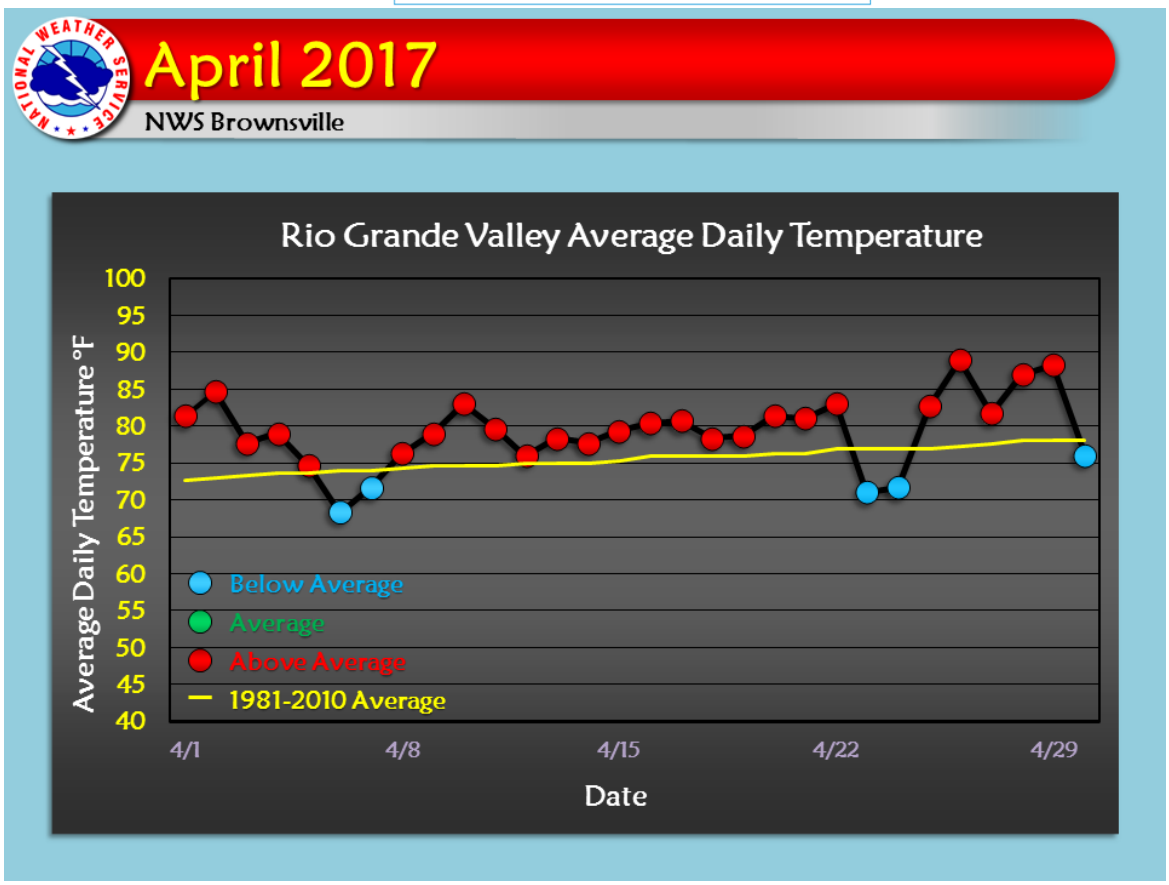
Maximum 30-Day Mean Avg Temperature for FALCON DAM, TX

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	82.8	2011-05-01	1
2	82.5	1967-05-01	0
3	82.1	1963-05-01	0
4	81.7	2002-05-01	0
5	80.8	1999-05-01	0
6	80.6	2006-05-01	0
7	80.4	1991-05-01	0
8	80.3	1972-05-01	0
9	79.3	2001-05-01	0
10	79.2	1986-05-01	0
11	79.2	2016-05-01	4
12	79.2	1964-05-01	0
13	79.0	2017-05-01	0
14	78.8	2012-05-01	0
15	78.2	2008-05-01	1
16	78.1	2000-05-01	0
17	77.9	1995-05-01	1
18	77.5	1970-05-01	1
19	77.3	2003-05-01	0
20	77.2	2015-05-01	0

Last value also occurred in one or more previous years.

Period of record: 1962-07-01 to 2017-05-01



April 2017: What Else Is New? Heat, Dominant

McAllen/Miller "Slips" to #2 Warmest All-Time

Overview

It began to get old.

For beach lovers and others who enjoy the "Valley Wind Machine" and very warm to hot temperatures, April 2017 was ideal: Surf zone (first sandbar) water temperatures average at or above 80°F, almost unheard of for the entire month of April, and the final week of April was the cherry on top of the already warm cake, with three of the final five days reaching triple digits along and west of US 281/IH 69C, including a full-Valley triple digit spike on April 26th that set an all-time April record in Brownsville (104°F) and caused a "flash drought" situation for many, as fine fuels (grasses and brush) dried out rapidly and became tinder.

Parts of the month were relatively pleasant, including the second to last week of the month which followed the last of April's rains which ended early on April 18th. Otherwise, the only other significant weather event of the month was rapidly-developed hailstorms in northern Cameron and Willacy County on April 2nd. An explosively developed hailstorm over the Zapata County ranchlands may have produced hail the size of baseballs during the evening of April 29th.

The Year So Far

The headline is not a misprint. McAllen/Miller Airport *only* slipped to #2 warmest, breaking a three month streak of warmest months in 2017! Regardless, #2 is still a notable accomplishment in a 56 year sample, particularly following the three prior months at #1 in 2017, and three of the final six months in 2016 also at #1! The following rankings were noted at McAllen/Miller Airport for each month of the ten month heat wave (day and night combined):

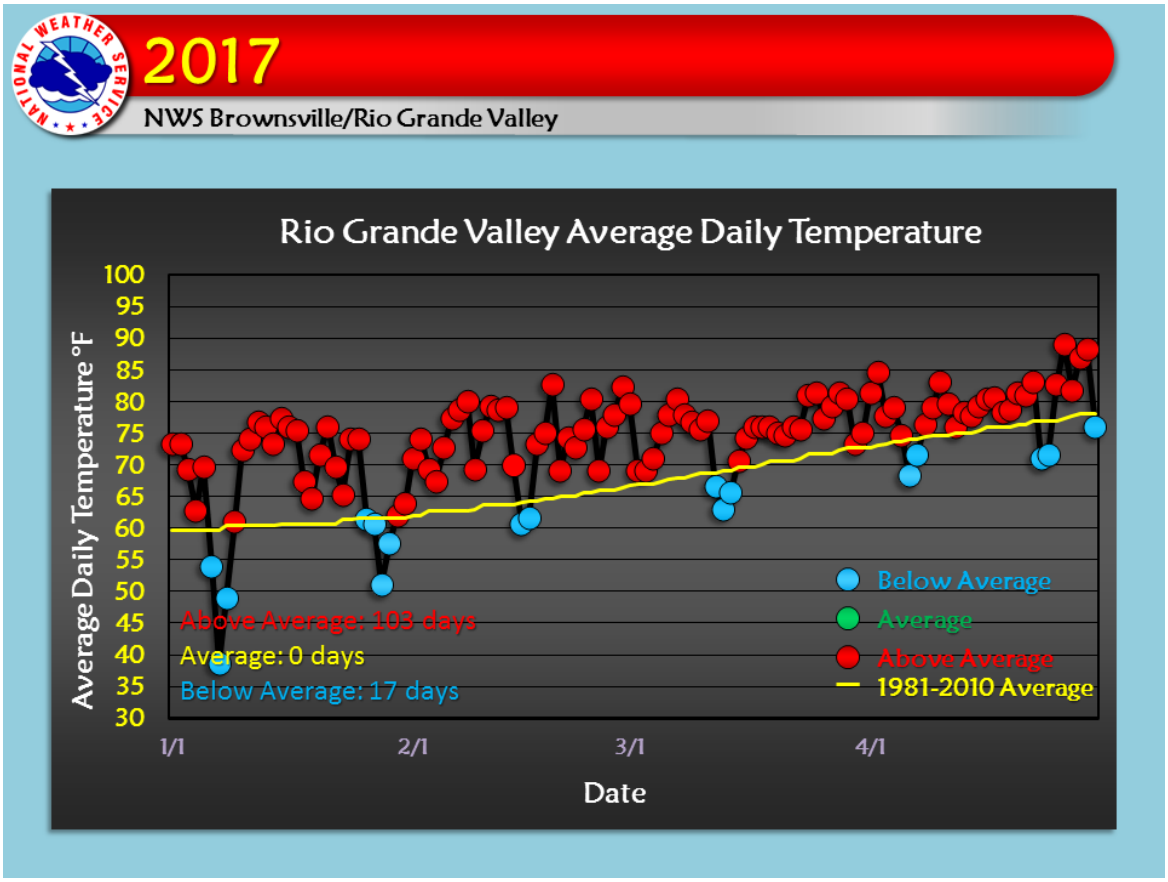
July 2016: #2 (91.3°F, current record 92.8 in 2009)
August 2016: #2 (90.7°F, current record 91.4 in 2009)
September 2016: #1 (88.8°F, prior record 87.7 in 2011)
October 2016: #1 (82.9°F, prior record 81.7 in 2004)
November 2016: #1 (75.6°F, tie – 75.6 in 1994)
December 2016: #3 (67.9°F, current record 69.4 in 1984)
January 2017: #1 (67.7°F, prior record 66.7 in 1989)
February 2017: #1 (75.3°F, prior record 71.4 in 1962)
March 2017: #1 (76.3°F, prior record 76.2 in 2016)

The following are a few impressive temperature statistics, since the big heat began ten months early (July 2016):

- For the "big three" Valley locations (Brownsville, Harlingen, and McAllen), the following was recorded:
  - ***Brownsville (since 1878):*** Average temperature – 77.3°F. Difference from #2: +2.1 degrees. Difference between #2 and #10: +0.8 degrees! Bottom line? Like Secretariat in the Belmont, the 2016/17 ten month record accelerated from the pack . By near *three times as much!*
  - ***Harlingen (since 1912):*** Average temperature – 77.2°F. Difference from #2: +2.2 degrees. Difference between #2 and #10: +0.8 degrees! Secretariat, again .
  - ***McAllen/Miller (since 1961):*** Average temperature – 79.8°F. Difference from #2: +2.7 degrees. Difference between #2 and #10: +1.8 degrees.

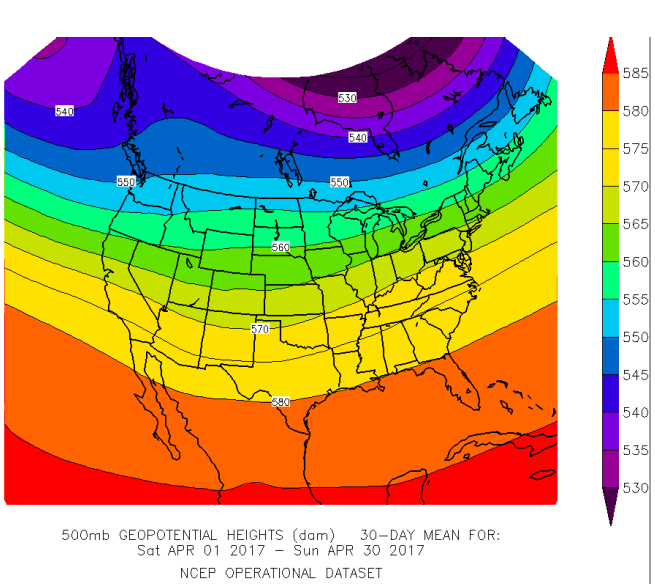
It's All Warm to Hot in 2017

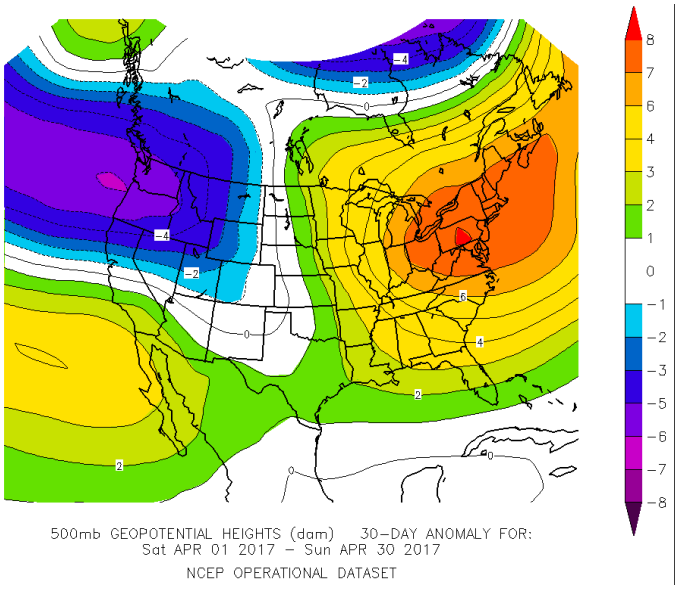
…but as the season warms up, the departure from average began shrinking as one might expect – after all, it gets a bit more difficult to routinely stay ~10 degrees above average when average begins moving into warm to hot territory, as it does in April. At month's end, daily highs range from the upper 80s to lower 90s east to west, and morning lows through the 60s.

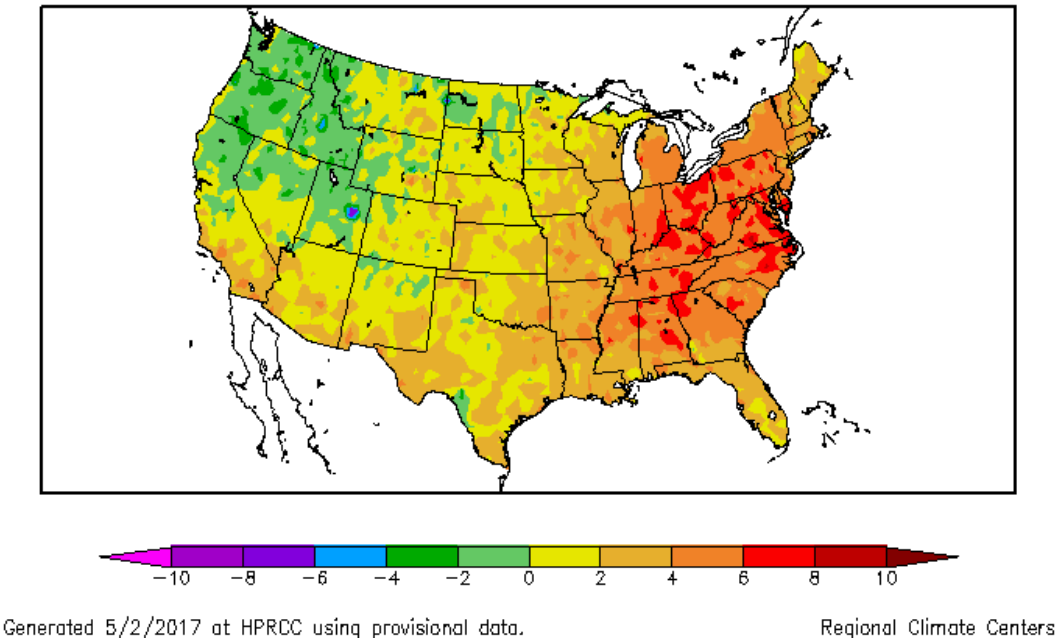


Pattern Matters

Similar to late March, the pattern across the United States featured a “flat” trough across the southwest U.S. with a flat ridge across the eastern seaboard (below, left). In most cases, the height of the 500 millibar pressure surface was above the long term average (below, right), regardless of troughing or ridging. The sole exception was across the Pacific Northwest and intermountain northern Rockies, which also had the only slice of below average temperatures in the United States (top of next page).







The general position of the eastward moving upper level disturbances remained just far enough north to keep the necessary lift well north of the Rio Grande Valley, but also favored deeper layers of “downslope” flow (arrow, left image) from the Sierra Madre toward the coast, including all of the southern tip of Texas region. This was shown classically during the final week – and weekend (April 28-30) – of the month. While winter weather raged in the form of near blizzard conditions in Amarillo extending northward into the Oklahoma Panhandle and western Kansas on the 29th and 30th, the Rio Grande Valley sweltered through a triple-digit Saturday along with heat index values above 110°F! The week that was April 23-30 shows this clearly in terms of the steering pattern departures from average (low over Oklahoma to “near normal” over the Rio Grande Valley), with temperatures on the whole ranging from cool/cold in northwest Oklahoma (10 degrees below average) to hot in the Rio Grande Valley (4 to 6 degrees above average).

The Pattern...and the Weather

Last Week of April 2017