



Air Quality Summary—August 2010



Baton Rouge Area

OZONE

There was only one day that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone in the Baton Rouge area during the month of August 2010. The Dutchtown monitor reached 78 ppb or 106 AQI on August 3.

There were three Ozone Action Days called for the Baton Rouge area during the month: August 2, 3 and 4

PM_{2.5}

There were no exceedances of the NAAQS for PM_{2.5} in the Baton Rouge area during the month of August 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in August.

Other Areas of the State

OZONE

There was one day that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone during the month of August 2010. The Shreveport Airport site reached 87 ppb or 129 AQI on August 3.

There were no Ozone Action Days during the month of August.

PM_{2.5}

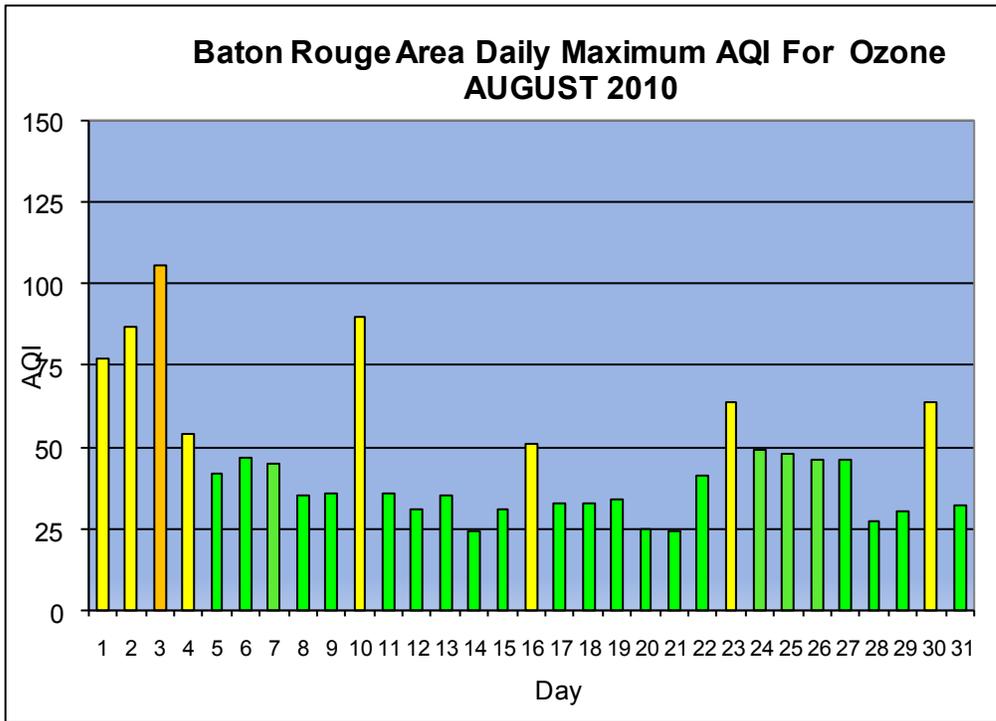
There were no exceedances of the NAAQS for PM_{2.5} in any area of the state during the month of August 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in August.

Statewide 8-HR Ozone Readings /AQI Above 75 ppb

DATE	AQI	8-HR OZONE Concentration (ppb)	MONITORING SITE
8/3/2010	129	87	Shreveport Airport
8/3/2010	106	78	Dutchtown



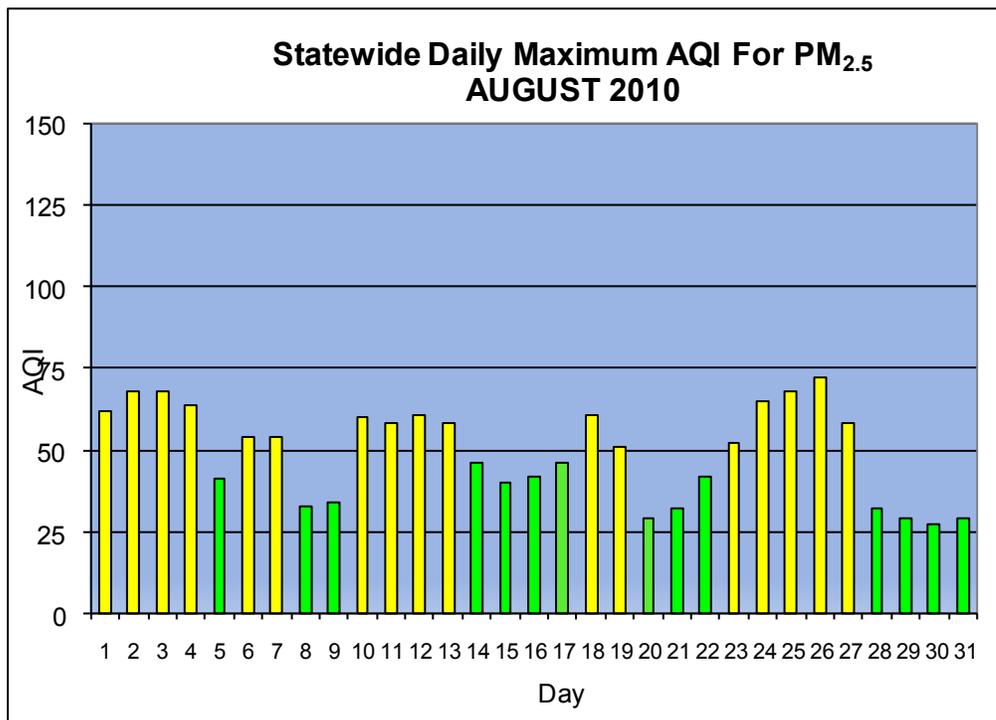
Air Quality Summary – August 2010



0-50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy
201-300	Very Unhealthy

Statewide High PM_{2.5} 24-Hour Average Readings - August 2010

DAY	UG/m3	AQI	SITE
1	21	62	Chalmette Vista
2	24	68	Chalmette Vista
3	24.2	68	Kenner
4	21.9	64	Pride
5	12.6	41	Shreveport Airport
6	17	54	Chalmette Vista
7	17	54	Chalmette Vista
8	10.3	33	Pride
9	10.4	34	Pride
10	20	60	Chalmette Vista
11	18.9	58	Westlake
12	20.4	61	Westlake
13	19	58	Chalmette Vista
14	14.1	46	Kenner
15	12.3	40	Kenner
16	13	42	Westlake
17	14.3	46	Shreveport Airport
18	20.6	61	Shreveport Airport
19	15.6	51	Shreveport Airport
20	8.8	29	Pride
21	10	32	Chalmette Vista
22	13	42	Chalmette Vista
23	15.8	52	Westlake
24	22.8	65	Westlake
25	24.1	68	Westlake
26	26	72	Chalmette Vista
27	19.2	58	Westlake
28	10	32	Chalmette Vista
29	9	29	Chalmette Vista
30	8.4	27	Pride
31	9	29	Chalmette Vista



Baton Rouge Climate Summary—August 2010

**Prepared by: Jay Grymes*

(based on available preliminary data as of September 5, 2010)

Warmer- than-normal weather continues to be the main story for Baton Rouge's regional weather this summer. August marks the fifth consecutive month with warmer-than-normal weather for the region -- August 2010's monthly mean temperature was 84.3°F, 2.9° above the monthly norm and ranking August 2010 as the seventh 'warmest' August since 1905 (the start of the continuous monthly record for Baton Rouge) .

Based on archives extending back to 1905, June-July-August 2010 ranks as the 2nd 'warmest' on record for Baton Rouge for these three months, with a three-month average of 83.8°F. Only 1921's Jun-Jul-Aug was warmer, with a three-month average of 84.3°F. (There is some debate as to whether the 1921 data are truly representative of conditions at that time).

Daily maximum temperatures at Metro AP during August 2010 reached 90° or above on 24 dates (compared to a long-term average of 23.2 days), with 9 days at or above 95°F. The summer's first 100° reading occurred on August 2nd, tying the record high for that date. In addition, the 99° recorded on August 1st established a new record high for that date. August's monthly temperature departure is well reflected in the daily average temperatures: daily means averaged above the norm for all but two dates -- August 5th & 18th.

Once again, morning minimums made some of the biggest weather news. The August monthly average minimum was 76.2°, 3.9° above normal. Daily minimums were above-the-norm on all but three dates -- August 5th, 25th & 26th -- and likely reflect elevated dewpoint temperatures (high humidity) that seemed to dominate the month. Most notable were the humid morning minimums on August 1st, 2nd and 3rd, which failed to drop below 80°F! Prior to August 2010, there had only been six verifiable occurrences of such 'warm' minimums for Baton Rouge, and there had never been back-to-back daily occurrences, much less three consecutive dates! The minimum of 82° on August 3rd ties Baton Rouge's record for the "warmest" low, (Of the six prior occurrences of minimums at/above 80°, five occurred during the three previous summers -- more fuel for the global-warming debate?)

Table 1: Average "daylight hours" sky conditions (to 12,000 ft) during August 2010, based on automated ASOS observations from Baton Rouge's Metro Airport.

Sky Condition: Sunrise to Sunset (Sky Coverage)	Clear to Mostly Sunny (0/10ths – 3/10ths)	Partly Cloudy / Partly Sunny (4/10ths – 6/10ths)	Mostly Cloudy to Cloudy (7/10ths – 10/10ths)
No. Days	6	18	7

Daylight hours (official sunrise-to-sunset period, excluding 'Civil Twilight') through the month ranged from 13.6 hours (Aug 1) to 12.8 hours (Aug 31).

Baton Rouge Climate Summary—August 2010

*Prepared by: Jay Grymes

(based on available preliminary data as of September 5, 2010)

Table 2: August 2010 rainfall for selected rainfall reporting stations across the greater Baton Rouge metro area. (Data are preliminary and provided courtesy of the National Weather Service, the LSU Southern Regional Climate Center, the USGS, and the LSU AgCenter.)

Rainfall-Recording Site	Monthly Rainfall	Monthly DFN	No. Days ≥ 0.01"	No. Days ≥ 1.00"
BR - Metro AP	12.96"	+7.10"	17	4
<i>NWS Cooperative Network Sites</i>				
BR - Concord Estates	9.62"	+3.71"	18	3
BR - Sherwood Forest	10.60"	+3.81"	17	6
Denham Springs	9.65"	+2.60"	19	4
Gonzales	8.31"	+1.89"	14	1
Livingston	10.24"	+4.37"	16	3
New Roads	11.30"	+6.25"	13	3
Oaknolia	M	M	M	M
Port Allen	M	M	M	M
<i>USGS HydroWatch Selected Sites</i>				
Clinton (07377195)	7.30"	--	18	2
Zachary (07377750)	10.75"	--	17	5
Comite nr. Comite (07378000)	7.68"	--	16	3
Prairieville (07380102)	7.19"	--	14	1
Pt. Vincent (07380120) (0.1")	8.70"	--	12	3
French Settlement (07380200)	7.33"	--	15	1
<i>LSU AgCenter LAIS Automated Stations</i>				
LAIS - Ben Hur Farm	9.32"	--	15	4
LAIS - Burden Plantation	M	--	M	M
LAIS - St. Gabriel Res Sta	9.81"	--	19	5
<i>CoCoRaHS Volunteer Observers</i>				
Old Jefferson 0.9 W (LA-EB-21)	M	--	M	M
Shenandoah 0.8 W (LA-EB-36)	10.06"	--	15	4
Monticello 3.0 ENE (LA-EB-19)	14.41"	--	19	5
Brownfields 5.8 NE (LA-EB-9)	7.43"	--	13	3
Baton Rouge 2.5 E (LA-EB-27)	10.48"	--	14	4
Baton Rouge 2.7 SW (LA-EB-2)	10.13"	--	19	4
Zachary 3.5 WNW (LA-EB-28)	9.51"	--	12	4
LSU Campus (LA-EB-33)	8.42"	--	16	4
WAFB-TV, Downtown BR	7.76"	--	15	4

DFN - Departure-from-Normal
M - Monthly Report Unavailable
"--" - Normals Not Available

4

(i) - Monthly Report May Be Incomplete
(e) - Estimated Value
(0.1") - 0.1" Resolution Only

Baton Rouge Climate Summary—August 2010

*Prepared by: Jay Grymes

(based on available preliminary data as of September 5, 2010)

Each of the sites in Table 2 (with 30-year normals) recorded above-normal rainfall during August, with Metro Airport and New Roads recording more than twice their respective monthly averages. For Metro AP, the month's 12.96" ranks August 2010 as the fourth "wettest" August since 1888 (the start of continuous monthly records). "Wetter" Augusts include 1926 (16.27", largely in response to Hurricane #3 that year), most recently, 1987 (14.48", much of which was generated by an unnamed tropical storm), and 1977 (13.31", but no 'named' tropical systems in the region). The regional (unweighted) average for the 23 sites in Table 2 is 9.52", with a median of 9.62" -- clearly above the monthly mean.

12 of the 23 sites in Table 2 recorded measurable rain on more than half of all August days; raindays of 1.0" or more ranged from 1 to 6 days, with a median of 4 days for the listed sites.

August reports from the Metro Airport ASOS weather platform included:

- 16 days with thunder, well-above the long-term August average of 12.5 days;
- 19 days with fog, including "dense" fog (visibility less than 1/4-mile) on August 10th;
- notable smoke and/or haze was reported on just two dates: August 3rd & 31st.

August winds for the Metro Airport ASOS platform averaged 5.0 mph, close to the 25-year August average of 4.8 mph (climatologically, August is the month of "lightest" average winds for Baton Rouge). Daily wind speeds during August 2010 averaged below 5.0 mph on 17 dates, including a three-day period (Aug 9-11) when winds averaged under 3.0 mph. Daily winds topped 10.0 mph on August 28th, fueled by a low in the coastal waters, with winds on most remaining days averaging between 5.0 - 8.0 mph. Wind gusts in excess of 30 mph were reported on four dates -- Aug 5th, 15th, 22nd & 23rd -- all associated with thunderstorm activity in the area. The monthly gust of maximum was 43 mph, recorded on the 22nd.

Drought Status:

The weekly **U.S. Drought Monitor** as of August 31st (Fig. 3) shows a northward retreat of the state's "drought" problem thanks to August's wetter-than-normal weather across southern Louisiana. Yet the **Drought Monitor** still shows a steep north-south gradient in terms of drought conditions across the Bayou State. Heading into September and October -- which tend to be some of the "drier" weeks of the year for Louisiana -- there seems to be little opportunity for quick relief from the drought for northern Louisiana, short of a passing tropical system.

The Extended Outlook:

Historically, extended-range outlooks for Louisiana into September show limited "skill" (accuracy), as there are few reliable atmospheric signals that provide long-range indications of temperature and rainfall tendencies for the central Gulf Coast region. Given the time of year, the potential for development of tropical activity in the Gulf becomes a major player in the long-range forecast. Assuming that the tropics "behave" for us in the coming weeks, temperatures in the next four to eight weeks likely will continue to run near-normal to above-normal -- extending the recent run of "warmer-than-normal" weather that has dominated the region since late spring. The rainfall outlook from the NWS Climate Prediction Center currently leans towards near-normal to above-normal rainfall for the coming weeks, again with the assumption that Louisiana is spared from a "wet" tropical hit.

Baton Rouge Climate Summary—August 2010

*Prepared by: Jay Grymes

(based on available preliminary data as of September 5, 2010)

Figure 1: August 2010 Daily Max/Min Temperatures and Precipitation as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm (Nicholson Drive).

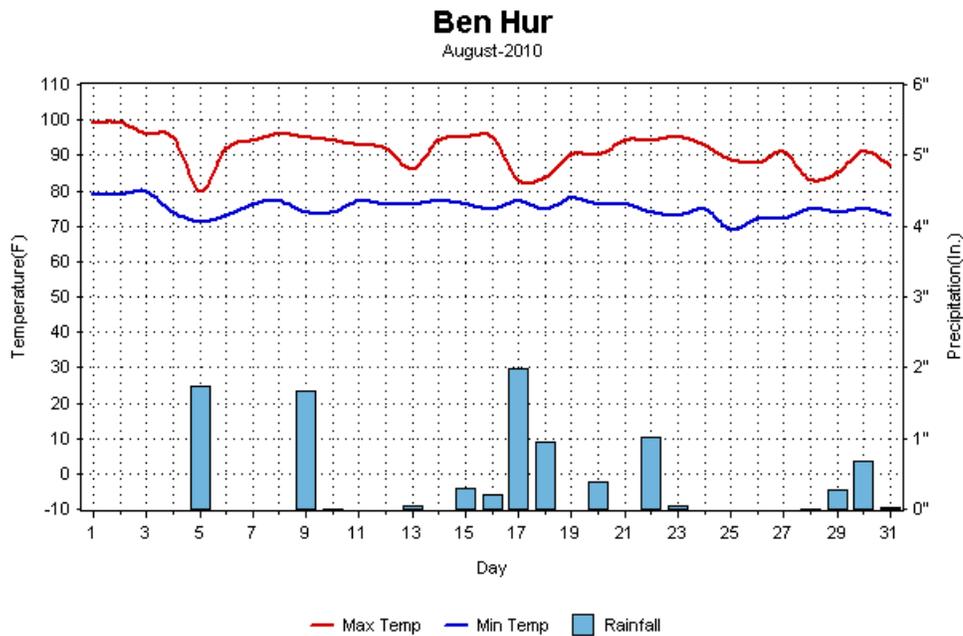
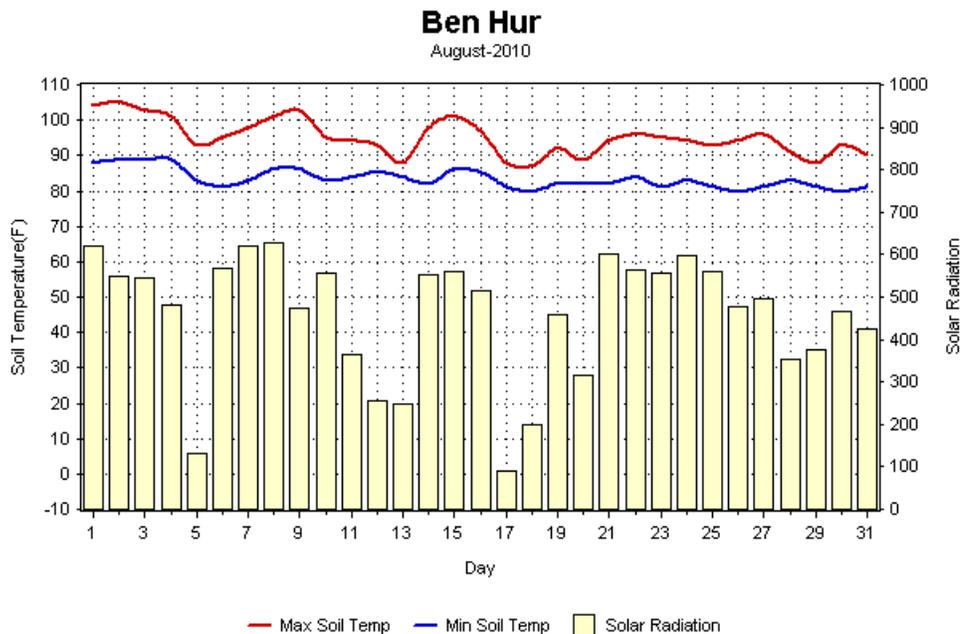


Figure 2: August 2010 Daily Solar Radiation and Max/Min Soil Temperatures (4 in. depth) as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm.



Baton Rouge Climate Summary—August 2010

*Prepared by: Jay Grymes

(based on available preliminary data as of September 5, 2010)

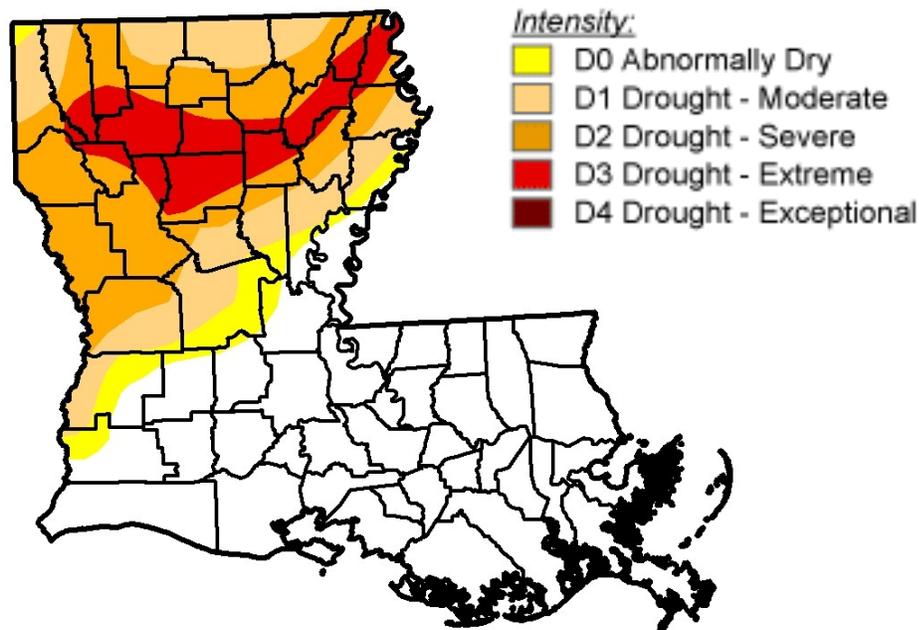
Tropical Weather Outlook:

While some may think that the 2010 Tropical Season has not lived-up to the pre-season hype delivered by many forecasting gurus, this has been an above-average season thus far. As of the end of August, the Atlantic Basin has seen six 'named' systems, three as hurricanes and two as 'majors' -- Danielle and Earl. Although not "hyper-active," all three of these end-of-August numbers are ahead of basin climatology according to National Hurricane Center statistics. In addition, since the mid-1990s -- the start of our recent run of elevated tropical activity in the Atlantic Basin -- there have been an average of roughly nine 'named' storms after September 1st, with two of these storms being Gulf systems.

And the statistics show us that more than half of the tropical 'energy' in the Atlantic Basin develops after September 1st. Bottom line: we are only now entering the peak of hurricane activity in the Atlantic Basin!

Figure 3: Weekly **U.S. Drought Monitor** depiction for 31 August 2010 .

Source: <http://drought.unl.edu/DM/>



Baton Rouge Climate Summary—August 2010

**Prepared by: Jay Grymes*

(based on available preliminary data as of September 5, 2010)

Acknowledgements:

- National Weather Service offices serving Louisiana
- LSU Southern Regional Climate Center (SRCC)
- Louisiana Office of State Climatology (LOSC)
- LSU AgCenter / LAIS Weather Monitoring Program
- U.S. Drought Monitor (<http://drought.unl.edu/DM/>)
- NWS Climate Prediction Center (NWS/CPC)
- NWS Storm Prediction Center (NWS/SPC)
- NWS Hydrometeorological Prediction Center (NWS/HPC)
- NOAA/National Climatic Data Center (NCDC)
- USGS, Louisiana
- WAFB-TV (Ch. 9), Baton Rouge

Prepared by:

Jay Grymes

WAFB-TV Chief Meteorologist & LSU AgCenter Climatologist (*Ret.*)

5 September 2010

*Jay Grymes, LSU AgCenter Climatologist and WAFB Chief Meteorologist, provides the climatology portion of this report as a free service to DEQ and the citizens of Louisiana.