



# The Co-Op Contributor

Serving the Co-Op Observer Network of the National Weather Service - Fort Worth Office

## Autumn/Winter 2008

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### Co-Op Contributor

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## Message from the Manager

The month of August began the transition to paperless observations for individuals using WxCoder. *Unless otherwise directed, all observers reporting via WxCoder no longer need to submit their B91 form.* At the end of each month, we will download the data directly from WxCoder, check for errors, and submit the data to NCDC.

Individuals reporting via IV-ROCS will soon follow suit. It is anticipated that all IV-ROCS users who still mail monthly forms (B91s) to the Fort Worth Office will cease to do so in the September/October timeframe. However, Fischer-Porter tapes will continue to be mailed to the Fort Worth Office.

We encourage all observers to log into WxCoder or IV-ROCS on a daily basis to submit their information. Logging into WxCoder or IV-ROCS on a daily (or near daily) basis is necessary to ensure data availability to the Forecast Office and to the National Climatic Data Center (NCDC) for direct download into the database. It is anticipated that NCDC will be downloading the data themselves very soon. For those observers reporting via IV-ROCS wishing to convert over to WxCoder please let us know.

### QUALITY CONTROL

A common problem that continues to occur when reporting temperatures is the incorrect recording of maximum and minimum temperatures. Please read the article below as a refresher of the rules on correctly recording maximum and minimum temperatures with the MMTS system.



I would like to remind our COOP family that your feedback is our only means of assessing the usefulness of our newsletter. We continue to invite submission of weather related stories, weather pictures, or just plain "tall tales" for future issues. So please help us in making this the best newsletter it can be. Feel free to email Jennifer or Gerald.

## Maximum / Minimum Temperature Refresher

One of the most repetitive mistakes that we find when reviewing the monthly B91 forms is incorrect recording of the maximum and minimum temperatures. One thing to remember when you are recording your temperatures is that you are not recording temperatures for "yesterday". For COOP observers, a climate "day" is 7 am - 7 am or 8 am - 8 am depending on when you take your readings. Therefore,

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when you reset your temperature box (MMTS box) in the morning, that begins the start of your new “day”- the next 24 hours. Your “At Observation” temperature on each consecutive day should be considered when determining the maximum and minimum temperature for the 24 hour period.

Here is a refresher of the guidelines on recording temperatures:

1. The maximum temperature *must be equal to or higher* than the “At Ob” temperature recorded that day *and* the previous day.
2. The minimum temperature *must be equal to or lower* than the “At Ob” temperature recorded that day *and* the previous day.

NOTE: For those observers who use WxCoder, the software will give you a warning message in red when the temperatures are not recorded correctly. This should give you an indication to check your readings and correct any errors before submitting your report! An example with regard to rule number 2 (above) is:

\* Min temperature **83** must be less than or equal to yesterday’s at observation temperature: **82**.

## Example #1

### Incorrect

DATE	TEMPERATURE F.		
	24 HRS ENDING AT OBSERVATION		
	MAX	MIN	(52) AT OBSN.
	1	77	51
2	78	52	55
3	54	39	39
4	56	33	35
5	61	35	40

### Correct

DATE	TEMPERATURE F.		
	24 HRS ENDING AT OBSERVATION		
	MAX	MIN	(52) AT OBSN.
	1	77	51
2	78	52	55
3	55	39	39
4	56	33	35
5	61	35	40

In example #1, your supposed maximum temperature on the 3rd is incorrect because it is not equal to or higher than the “At Ob” temperature recorded that day and the previous day (55 on the 2nd and 39 on the 3rd). In this case, your maximum temperature should be at least 55 degrees since that is the higher of the two “At Ob” recordings. You should correct your form so that the maximum temperature is at least 55 degrees. If you made an error and do not know for sure what the maximum temperature was, please adjust the maximum temperature to equal the highest “At Ob” temperature...55 degrees, in this case.



## Example #2

### Incorrect

DATE	TEMPERATURE F.		
	24 HRS ENDING AT OBSERVATION		
	MAX	MIN	(52) AT OBSN.
	1	77	51
2	78	52	55
3	55	39	39
4	56	36	35
5	61	35	40

### Correct

DATE	TEMPERATURE F.		
	24 HRS ENDING AT OBSERVATION		
	MAX	MIN	(52) AT OBSN.
	1	77	51
2	78	52	55
3	55	39	39
4	56	35	35
5	61	35	40

In example #2, your supposed minimum temperature on the 4th is incorrect because it is too high. Your minimum temperature must be equal to or lower than the “At Ob” temperature recorded that day and the previous day (39 on the 3rd and 35 on the 4th). In this case, your minimum temperature should be equal to or lesser than 35 degrees since it is the lesser of the two “At Ob” recordings. You should correct your form so that the minimum temperature is equal to or less than 35 degrees. If you made an error and do not know for sure what the minimum temperature was, please adjust the minimum temperature to equal the lowest “At Ob” temperature...35 degrees, in this case.

## Extreme Heat to Excessive Rain

When I first started writing this article in early August, I anticipated I would only be writing about the extreme heat and lingering drought that June and July had brought and was probably going to last through August. But then things changed in August. What a difference a few months can make! As the old saying goes... “If you don’t like the weather in Texas, wait a little bit.” In June and July, 100 degree temperatures and little rainfall plagued the region. North TX was flirting with a record heat and dry conditions were extending the drought and increasing the wildfire danger. However, that quickly changed in August when tropical storm Edouard moved into north TX and then another upper level system brought flooding rains. Temperatures in August dropped overall, and after the rain had soaked in and receded, yards started to green up again.

Overall, June was a quiet but warm month. The average temperature at DFW Airport was 86.5 degrees making it the 3rd hottest June on record. The airport did manage to pick up 0.84” of rain but that small amount made it the 21st driest June on record. Waco Regional Airport was slightly cooler with an average temperature of 84.0 degrees making it the 16th warmest June. However, Waco only measured 0.18” inches of rain the entire month making it the 4th driest June on record. There were only five 100 degree days in June at DFW and one 100 degree



day at Waco. (A “100 degree day” is a day when the temperature meets or exceeds 100 degrees Fahrenheit.)

The biggest story in July was the continuous 100 degree heat that started in the middle of the month and lasted through early August. DFW took the brunt of the heat with an average temperature nearly 3 degrees warmer than Waco. The average temperature at DFW was 89.0 degrees, making it the 4th hottest July on record. Waco’s average temperature was 86.3 degrees.

## DFW

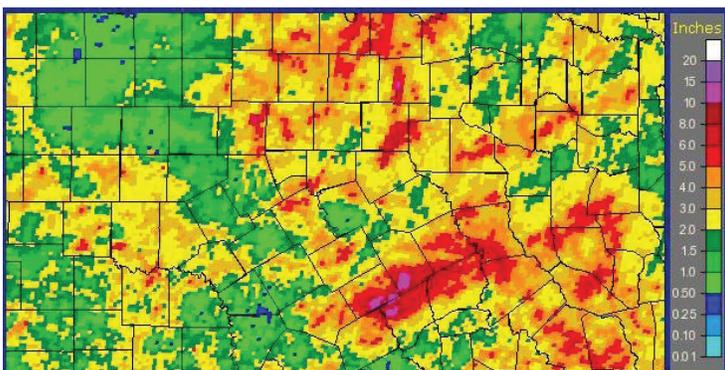
- 16 - 100 degree days in July = 7th most on record for the month of July
- 12 - Consecutive days over 100 degrees from July 25 to August 5
- 21 out of 24 days over 100 degrees between July 18 and August 10

## Waco

- 11 - 100 degree days in July
- 11 - Consecutive days over 100 degrees from July 26 to August 5
- 18 out of 22 days over 100 degrees between July 20 and August 10

The month of August started out hot despite the presence of tropical storm Edouard. The hottest temperatures of the year so far were recorded in early August. DFW soared to 107 degrees on August 3rd, and Waco soared to 105 degrees on August 3rd. And then the pattern changed... A slow moving upper level low slipped south out of Wyoming, crossed Colorado, and moved into north TX by August 20th. A tropical airmass, characterized by high amounts of moisture, had settled over the region setting up the stage for a heavy rainfall event. From August 15 to August 20, numerous showers and thunderstorms plagued varying parts of north TX on a daily basis; at times producing rainfall rates up to 2 inches per hour! Flash flooding became a daily problem as copious amounts of rain continued to fall in areas that were receiving several inches a day. Not everyone received several inches of rain, but the following image shows that most of north TX received at least 2 inches and a few locations received over 10 inches of rain!

Waco set two consecutive daily rainfall records when 3.48” of rain fell on the 18th and then 3.76” of rain fell on the 19th. The total rainfall at Waco Regional Airport for the month of August was 10.33” making it the wettest August on record. In contrast, DFW Airport only picked up 2.82” of rain in August.

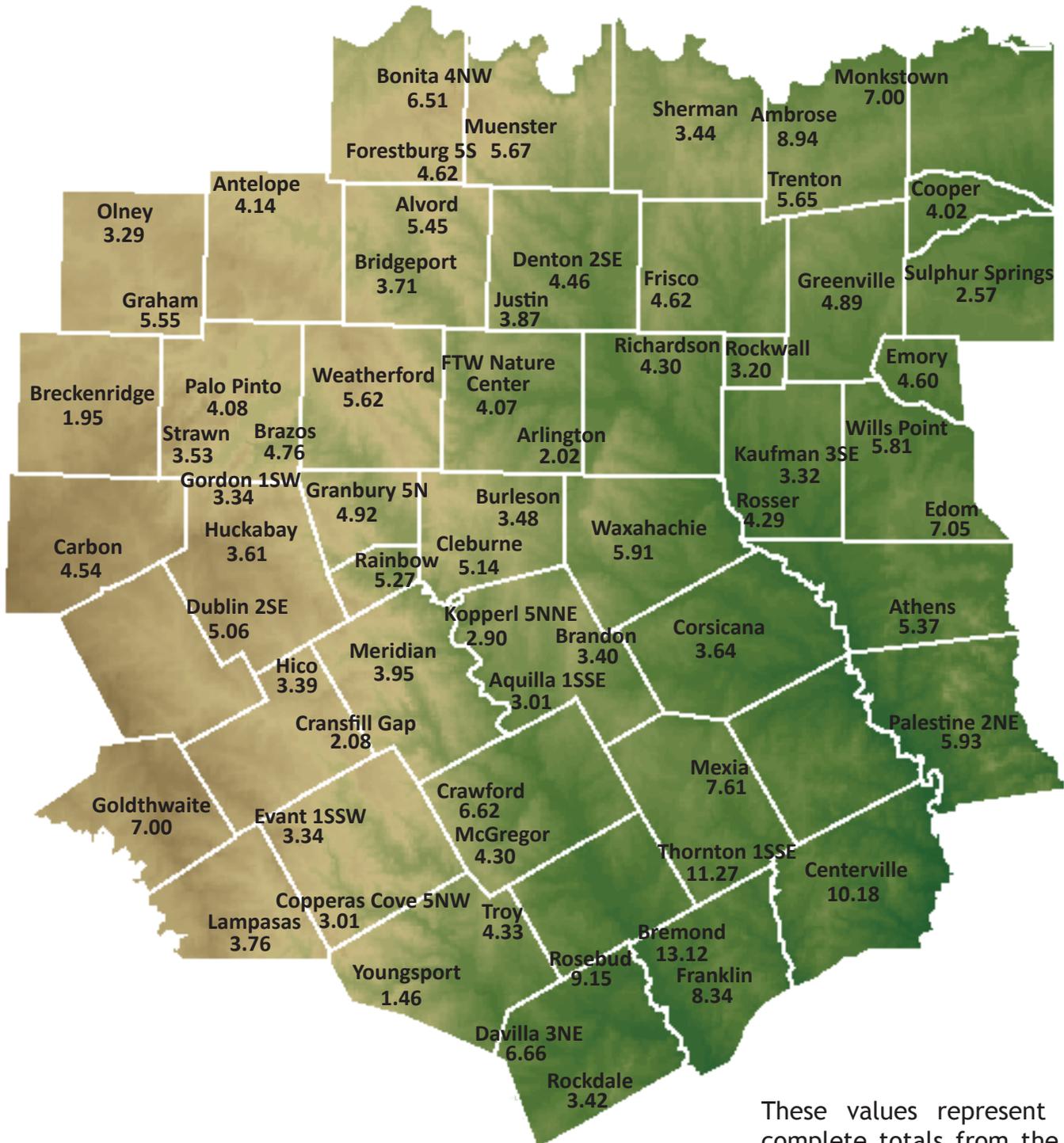


**Left:** Radar estimated rainfall across north Texas for the month of August. The red color indicates greater than 5 inches of rain. The purple color indicates greater than 10 inches of rain.



# The Co-Op Contributor

## August Rainfall Totals From Selected COOP Observers



These values represent the most complete totals from the month of August.



## Two Tropical Systems Move Into North Texas This Summer

In a rare summer event for north Texas, both Tropical Storm Edouard and Hurricane Ike made landfall on the southeast Texas coast and then proceeded to track up into north Texas bringing rain and wind with them. According to our records, never have two tropical systems tracked across north Texas during the same year. Oftentimes the remnants of a storm or left over moisture from a Pacific tropical storm will bring periods of heavy rainfall to north Texas, but never has the official track of an Atlantic basin tropical storm moved into north Texas twice in one year.

Edouard developed in the northern Gulf of Mexico and made landfall in southeast Texas on August 5th. Maximum estimated sustained wind speeds were 65 mph and rainfall totals were up to 6.5". Overall, the impacts from Edouard were minimal along the coast.

After making landfall, Edouard tracked northwestward into north Texas moving into Robertson County and then crossing to Comanche County. The tropical storm had weakened below tropical depression status (sustained winds less than 34 mph) by the early morning hours of the 6th and was slowing down in forward speed as it neared Hamilton, Mills, and Comanche County. Over these three counties, nearly 6 inches of rain fell with at least one local citizen estimating 11" of rain. Widespread flash flooding occurred as a result with several county roads covered in water. Back near Robertson County, rainfall totals average 1.0-1.5".

### 24-Hour CoOp Rainfall Totals From Edouard (Ending morning of 8/6)

Bremond	0.52
Cransfill Gap	0.66
Thornton 1SSE	1.50
Mexia	1.60
Evant 1SSW	1.90
Centerville	2.00
Huckabay	2.00
Goldthwaite 1WSW	2.07
Mullin 5NE	3.91

Hurricane Ike was a powerful Category 2 hurricane when it made landfall on Galveston Island at 2:10 am on September 13th. Much of the Texas coast from Surfside Beach to Port Arthur was devastated by hurricane force winds, storm surge and flooding. Maximum sustained wind speeds at landfall were 110 mph, but what was impressive about Ike was the large expanse of the wind field. At landfall, hurricane force winds extended 120 miles from the center of the storm, and tropical storm force winds extended 275 miles from the center. However, as Ike moved farther inland, the expanse of the winds slowly decreased.

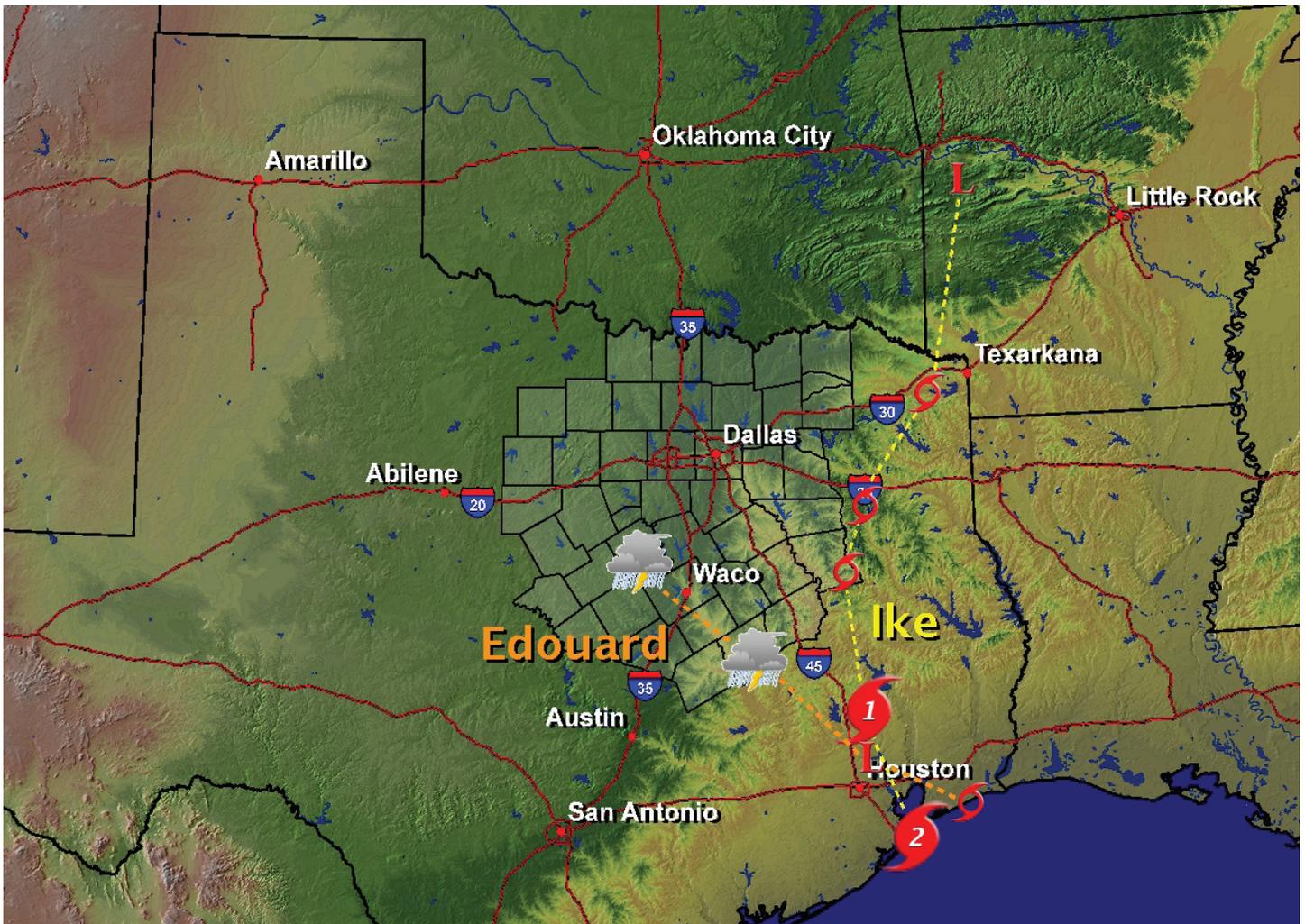
By the early afternoon hours, Ike was moving into Anderson County in north Texas and was downgraded to a tropical storm. Flooding of low lying areas, numerous trees and power lines down, and some minor structural damage was the extent of damage in the southeastern counties of north Texas where the center of circulation tracked.



## Tropical Systems (concluded)

Strong and gusty winds spread all the way to the I-35 corridor as Ike neared north Texas. The highest wind gust recorded was 44 mph at Corsicana Airport. On average, the winds in north Texas were sustained at 20 to 30 mph with gusts of 30 to 40 mph. In southeast Texas, Houston Hobby Airport measured a sustained wind speed of 75 mph with a wind gust of 92 mph before the wind sensor failed. On the other side of the storm, the wind sensor in Beaumont continued to provide data during the entire event and for several hours reported sustained winds around 62 mph and wind gusts of 84 mph.

In north Texas, the highest rainfall total recorded from Ike was 3.95" at an automated weather station near Palestine. From our COOP observers, Sulphur Springs recorded 3.32" and a few other sites recorded over 2" of rain. Most locations along the track of the storm in southeast north Texas reported 1-3" of rain.



*Above:* Tracks of Tropical Storm Edouard and Hurricane Ike.



## Cooking Corner Recipe - Au Gratin Potatoes

Submitted By: Tracy Howieson - West Gulf River Forecast Center

*Preparation Note: Recipe can be completed a day ahead and refrigerated.*

### Ingredients:

- ▶ 16 potatoes - Boil with skin on...cool...peel and shred OR
- ▶ Bag of shredded hash brown potatoes
- ▶ 3 or 4 cups of American or Mild Cheddar cheese (shredded)
- ▶ 2 pints of whipping cream
- ▶ Onion (diced)
- ▶ Salt (as desired)

### Steps:

- ▶ Using a 4 quart casserole dish, layer the potatoes, cheese, onion, and salt for escalloped potatoes
- ▶ Finish with cheese on top
- ▶ Pour the whipping cream over the layers just before baking
- ▶ Bake covered at 350° to 375° for 1.5 hours.
- ▶ Remove and let sit covered for 10 minutes

Makes 16 1-cup servings at 296 calories per serving.

**WE WISH YOUR FAMILY A SAFE AND  
HAPPY HOLIDAY SEASON !!**

