

# Storm Fury on the Plains

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## For Many Areas Summer 2016 Rained Supreme

By Eric Schminke – Meteorologist

Meteorological summer runs from June 1<sup>st</sup> to August 31<sup>st</sup> and while heavy rain-producing thunderstorms have paid countless visits to Kansas throughout history, some of the visits they paid us last summer were a bit lengthy. This was especially true in south central Kansas.

Contrary to the title of this article, this summer actually started quite dry. During the month of June, rainfalls across most of central, south central and southeast Kansas were between 2.50 and 4 inches below normal. That would change in a hurry as numerous thunderstorms, many of which were severe, did more than just dampen the 4<sup>th</sup> of July Weekend.

### July 4<sup>th</sup> holiday weekend started with a ‘bang’

For residents of central and south central Kansas, the July 4<sup>th</sup> holiday weekend literally started with a ‘bang’ as numerous severe thunderstorms put on a fireworks show of their own. On the 2<sup>nd</sup> and 3<sup>rd</sup>, the nasty convection unleashed torrential rains that were so intense that one couldn’t help but wonder if they were driving through a car wash. Hardest hit were Reno, Sedgwick and Butler counties where 4 to 8 inches inundated many areas.

#### 10 greatest 1-day rainfalls on Wichita’s since July 1<sup>st</sup>, 1888

10.31	09/12/2008*
6.82	06/08/1923
6.03	04/22/1944
5.79	10/31/1998**
5.78	09/26/1999
5.72	07/02/2016
5.53	08/15/1938
5.1	04/26/2009
4.76	06/05/1916
4.73	09/07/1911***

*Parts of Wichita were swamped by 9 inches.* The 5.72 inches measured on the 2<sup>nd</sup> at Eisenhower Airport not only washed out the calendar day record of 2.04 inches measured in 1989 by a staggering 3.68 inches, *it was the 6<sup>th</sup> greatest 1-day rainfall of all time.*

\*This 24-hour total broke the record of 7.99 inches set on September 6<sup>th</sup>-7<sup>th</sup>, 1911 that had stood for **97 years.**

#### \*\*The Halloween Flood.

\*\*\*The 4.73 inches measured on Sep. 7<sup>th</sup> combined with the 3.26 inches measured on the 6<sup>th</sup> to produce what, at the time, was Wichita’s greatest 24-hour rainfall of 7.99 inches. (Geez, let’s call it an even 8 inches and be done with it.)

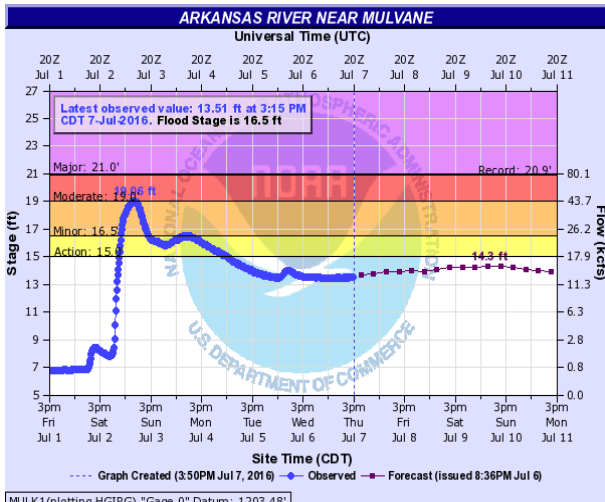
No doubt, the flash flooding that resulted was serious, life-threatening and resulted in many rescues. In southeast Wichita, 3 people needed to be rescued when their vehicle was swept off a road 3 miles southeast of McConnell Air Force Base. In the northeast Wichita suburb of Kechi, multiple homes were flooded. ***The 2-day total of 7.10 inches that inundated Eisenhower Airport in a 24-hour period that bridged the 2<sup>nd</sup> and 3<sup>rd</sup> alone was even greater than Wichita's 10<sup>th</sup> wettest July on record.*** Wichita's total rainfall in July of 1929 was 7.08 inches. By the time the 3<sup>rd</sup> had handed off the baton to the 4<sup>th</sup>, Wichita had measured 7.47 inches of rain which already guaranteed the Air Capital a 5<sup>th</sup> place ranking in the "Ten Wettest Julys" sweepstakes. Wichita would receive another 2.20 inches from the 5<sup>th</sup> to the 31<sup>st</sup>. Severe thunderstorms that raced across south central Kansas in the evening of the 28<sup>th</sup> with 60 to 85 mph winds brought 1.03 inches to Eisenhower Airport to enable 2016 to jump into 2<sup>nd</sup> place on the "Wettest Julys" list.

The following are Wichita's 10 Wettest Julys:

- 1) 13.37 1950
- 2) **9.67 2016**
- 3) 9.22 1962
- 4) 8.46 1922
- 5) 7.69 2013
- 6) 7.46 1904
- 7) 7.40 2015
- 8) 7.38 1959
- 9) 7.19 1958
- 10) 7.08 1929

### Rivers 'rise to the occasion'

With so much rainfall, rivers across south central Kansas certainly 'rose to the occasion. Among them were the Arkansas, the Little Arkansas (which suddenly wasn't so little), and the Walnut rivers as well as the Cow and Cow-skin creeks. A few gaging sites on the Arkansas and Little Ark ventured into moderate flood category.



*Hydrograph of the flooding on the Arkansas River near Mulvane with a ~11 foot rise from*

### Holy 'cow' it's still in flood?!

The heavy rains definitely had a profound effect on the Cow Creek in Hutchinson. Saturday morning's stage, July 2<sup>nd</sup>, was only 3.4 feet. The creek reached flood stage, 9.5 feet, late Sunday morning then went into moderate flood very early Monday morning. Cow Creek would remain in "moderate flood", reaching a crest of 11.2 feet, until very early Thursday morning, the 7<sup>th</sup>, a 3-day span. The creek

would remain in flood until late Thursday afternoon. All or parts of 7 counties would be under either a flood or a flash flood warning for 2 or 3 days. ***Rice County would be under a flood warning for a week.***

More severe thunderstorms invaded the region in August and like July, they produced torrential rains that caused more serious flooding and flash flooding. The flooding occurred on the first weekend from the 5<sup>th</sup> to the 7<sup>th</sup> and the third weekend from the 19<sup>th</sup> to the 21<sup>st</sup>. This time both south central and south-east Kansas would get hit, and hit hard.

On the 5<sup>th</sup>, a stationary front set up camp across southern Kansas. The front would eventually shift very slowly into northern Oklahoma. With very high octane moisture entrenched across these areas, coupled with very weak flow in the upper atmosphere, the stage was set for slow, torrential rain-producing thunderstorms across south-central and southeast Kansas where 2 to 3 inch amounts were common overnight from the 5<sup>th</sup> to the 6<sup>th</sup>. On the 6<sup>th</sup>, Wichita recorded 2.17 inches of rain which washed out the record of 1.45 inches set for the date way back in 1921.

On the 7<sup>th</sup>, the faucet was turned up even further as the Air Capital was soaked by another 2.67 inches. This set a record for the date by edging the 2.62 inches set in 1888 when Wichita's climate record began on July 1<sup>st</sup> of that year.

From the 5<sup>th</sup> to the 7<sup>th</sup>, nearly 6 inches (5.95 inches to be exact) were measured at Eisenhower Airport. Up to and including the 9<sup>th</sup>, the Air Capital measured 6.82 inches at Eisenhower Airport. This already guaranteed 2016 a top 10 finish on the "Wettest Augusts" list, tying it with 2003.

### August also proves to be wet and wild

More severe thunderstorms invaded the region in August and like July, they produced torrential rains that caused more serious flooding and flash flooding. The flooding occurred on the first weekend from the 5<sup>th</sup> to the 7<sup>th</sup> and the third weekend from the 19<sup>th</sup> to the 21<sup>st</sup>. This time both south central and southeast Kansas would get hit, and hit hard.

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#### The following are Wichita's 10 wettest Augusts:

- 1) 11.96 2005
- 2) 10.63 2013
- 3) 8.50 1933
- 4) 8.28 2016**
- 5) 7.91 1960
- 6) 7.77 1888
- 7) 7.69 1987
- 8) 7.67 1895
- 9) 7.57 1991
- 10) 6.82 2003

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Shortly after midnight on the 8<sup>th</sup>, a flash flood warning was issued for all of south central Kansas along and west of I-35/I-135. As the morning progressed, more flood warnings would be issued for much of south central and southeast Kansas and would be in effect the rest of the day.

That weekend, from the 5<sup>th</sup> to the 7<sup>th</sup>, nearly 6 inches (5.95 inches to be exact) were measured at Eisenhower Airport. Up to and including the 9<sup>th</sup>, the Air Capital measured 6.82 inches at Eisenhower Airport. This already guaranteed 2016 a top 10 finish on the "Wettest Augusts" list, tying it with 2003.

### Unprecedented flash flooding turns deadly

On the afternoon of the 19<sup>th</sup>, a strong cold front that stretched from Iowa through north central and southwest Kansas to the Oklahoma panhandle ventured into an extremely moisture-rich environment. With the upper-level flow nearly paralleling the front, the numerous thunderstorms that developed traversed much of south-central Kansas repeatedly like a long freight train. Hardest hit were southeast Sedgwick, northern Sumner, northern Cowley and southwest Butler counties where most of these areas were submerged by **4 to 8 inches of rain in only 3 to 5 hours that evening.**

Two flash flood warnings were issued for these areas, at 812 PM CDT, and at 1110 PM CDT. When the second flash flood warning was issued at 1110 PM CDT, rainfalls in most areas had increased to 5 to 8

inches in only 6 hours. *The greatest amount was in Rose Hill where the town was submerged by around 9 inches in only a few hours.*

The flash flooding was so serious that many vehicles were swept off roads and highways. One such incident occurred in the southwest corner of Butler County where a truck was swept off a road next to Polecat Creek just a couple miles south of Rose Hill shortly before 10 PM. It was here that tragedy struck when a 62-year old man went missing. The search became a recovery operation Saturday evening. The most serious flash flooding occurred in Derby, Mulvane and Rose Hill;



*Flash flooding in Mulvane. Picture courtesy of Rebecca Rico.*



*Flash flooding in Mulvane. Picture courtesy of Rebecca Rico.*

this was the worst flash flood that anyone could remember. The 8.28 inches measured at Eisenhower Airport enabled 2016 to also join the “Ten Wettest Augusts” Fraternity.

For most of the summer, Salina had managed to avoid being inundated as the city only measured 0.45 inch in June and 2.33 inches in July. In August that changed in a hurry when the city measured 7.84 inches. This would make 2016 their 4<sup>th</sup> wettest August on record. Of this total, a whopping 2.73 inches swamped Salina on the 30<sup>th</sup>.

The 2.73 inch total for the 30<sup>th</sup> inundated the record of 1.38 inches set in 1981. Because the

rainfalls from June and July were below to much below normal, Salina’s summer rainfall only totaled 10.62 inches.

The following are Wichita’s 10 wettest summers:

1)	23.61	2005
2)	23.32	1950
3)	<b>20.78</b>	<b>2016</b>
4)	20.15	2013
5)	19.90	1951
6)	18.87	1948
7)	18.71	1995
8)	18.07	1960
9)	17.75	1989
10)	17.09	2004

Obviously the same couldn’t be said for Wichita. Thanks to the sensational soakings of July and August, 2016 would be the Air Capital’s 3<sup>rd</sup> wettest summer on Record.

With the tremendous rainfalls of July and August, 2016 became Wichita’s 3<sup>rd</sup> wettest summer on record.

If this proves to be comparable to the summer in the precipitation department then we can be sure that KDOT staff and all other snow removal crews will be working triple overtime. In fact, it may be early June before all of the snow has melted.

The following are Salina’s 10 wettest Augusts:

1)	13.75	1977
2)	8.72	1927
3)	7.99	1929
4)	<b>7.84</b>	<b>2016</b>
5)	7.48	1960
6)	7.37	1985
7)	6.80	1917
8)	6.70	2006
9)	6.60	1887
10)	6.58	1942

## We want your feedback!

Please fill out our [survey](#) so we can determine the future of this newsletter.

## Will you accept this challenge?

*By: Chance Hayes—Warning Coordination Meteorologist*

**We at the NWS challenge you to slow down and drive at speeds according to the weather conditions this winter.**

Have you ever noticed those signs that state “Bridge Ices before road” or “Bridge may be icy”? We hope that you have and that you pay attention to those signs and slow down when winter weather conditions warrant slower speeds.

**Slow Down for Icy Roads**

Icy roads are likely the most dangerous type of weather hazard to drivers, more so than tornadoes and floods.

Over the past 10 years there have been 0 fatalities due to tornadoes on the major highways in Kansas compared to an estimated 224 fatalities due to icy roads. Injuries due to icy roads skyrocket up to just over 15,000 during that ten year span. Now do you understand just how dangerous icy roads can be?

Helpful tips:

- If it’s snowing, even flurries, plan on bridges being icy early before becoming snow packed.
- Look to see if ice is hanging from signs, on vehicle windshields, or guard rails.
- Just because you have an SUV, 4WD, or ABS brakes, you are not immune.
- Black ice looks just like wet pavement and is extremely slick!

## What does winter have in store for Kansas?

Hopefully you follow the [Climate Prediction Center \(CPC\)](#) for longer range forecasts then turn to our website for the more near term information. The CPC has issued a three month outlook for December through January which shows that much of Kansas will have near normal temperatures except for the far southern sections of the state.

As for precipitation (rain, liquid equivalent of snow and ice), you can expect near normal amounts as well except across the southwest sections of the state.

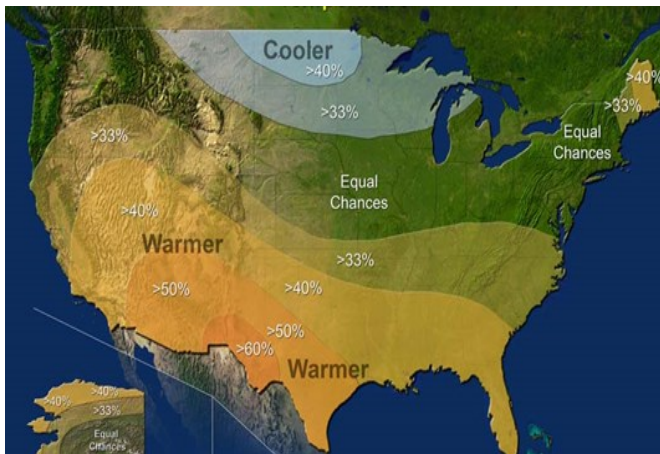


Figure 1. Climate Prediction Center’s winter temperature outlook



Figure 2. Climate Prediction Center’s winter precipitation outlook

## Rain Gauge Calibration

*By: Janet Salazar - Service Hydrologist & Eric Metzger – Meteorologist*

This fall the Service Hydrologist (Janet Salazar) and Meteorologist Intern (Eric Metzger) conducted rain gauge site visits at Mentor, Alta Mills and Valley Center. These rain gauges are co-located with United States Geological Survey's (USGS) Data Collection Platforms (DCP) which also collect river stage data with the stream nearby. These site visits are required at least twice a year to clean and calibrate the rain gauges. The site visits ensure the gauges are working properly and ensure the critical rainfall and rain rate data is accurately fed into National Weather Service systems. This data serves as one of the components into the river flood model to produce accurate river forecasts. This also provides our forecasters real-time data to determine any issuances of flood warning products needed in those areas.



The procedure we follow to start the calibration and cleaning is first to bring down the swivel arm to place the Texas Electronic Rain Gauge on a level platform; second we remove lid and screen to clean any debris (besides the removal of dirt we find spiders and gnats inside the bucket). Third, a set amount of water is poured through the funnel (825 mls = 1 inch precipitation); fourth we count the number of tips the bucket registers with a digital counter. Lastly, adjustments are made to set screws if the number of tips is not within the tolerance of plus or minus 10 tips from 100, but we usually like to calibrate within 5 tips from 100.



All three sites did need some sort of attention this time around. Mentor and Valley Center both had to be calibrated as they were slightly underreporting rainfall by less than one tenth of an inch. Alta Mills needed the most attention as it was completely clogged with dust and dirt from most likely the adjacent county road. While it likely could still report rain, the rain rate would be way off as the caked dirt would slow the drip rate into the bucket.

The visits were all conducted in one day, and we dodged escaped cattle along the way. There is always an adventure to be had while working out in the field. We've encountered mice living in the gauge house to a family of beautiful butterflies befriending us. Another interesting tidbit, it was apparent the Alta Mills gauge had been struck with a bullet as part of the brass lid was dented in such a way to indicate a high speed impact. It is possible it could have been a hail stone but it would require a rather large hail stone (>2") to dent the lid.

# Warm and Wet So Far in 2016

*By: Andy Kleinsasser - Meteorologist*

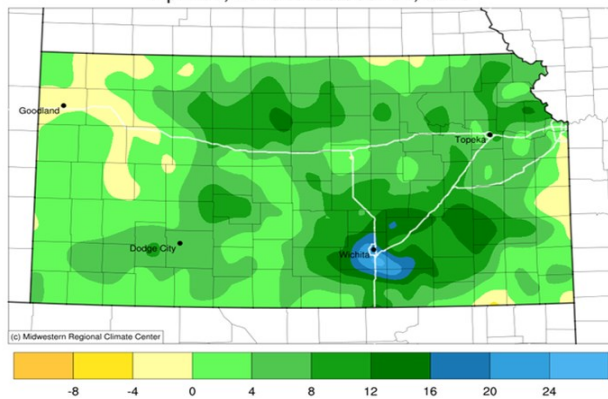
With a handful of exceptions, much of the Kansas region has proved warmer and wetter than average since spring.

Much of the state was two to three degrees warmer than normal since the beginning of 2016 with pockets reporting average temperatures four to five degrees warmer than normal. A handful of months were ranked top-ten warmest across the Sunflower State since records began in the 1890s including March (7<sup>th</sup> warmest), June (9<sup>th</sup> warmest) and October (6<sup>th</sup> warmest). Statewide, the only cooler than normal month since January was May. Wichita has experienced it's 2<sup>nd</sup> warmest January through October period on record (since 1889).

## Top rainfall totals across central, south-central southeast Kansas: April-October 2016

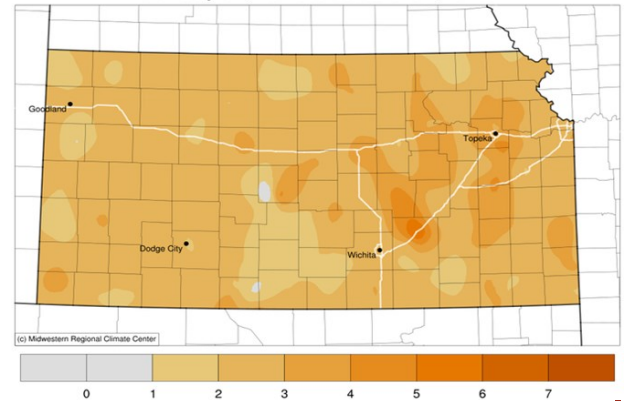
Location	April-October Precipitation (Inches)	Departure from Normal (Inches)
Rock 3 SW	55.33	+25.42
Haysville 3 SE	52.69	+25.16
Smileyberg 1 N	50.70	+20.06
Yates Center	49.01	+16.18
Potwin	48.53	+20.36
Wichita Eisenhower	47.41	+22.10
Thrall 4 S	46.06	+17.23
Madison	45.73	+15.48
Peck 2 S	45.17	+17.98
Fredonia	44.06	+11.69

**Accumulated Precipitation (in): Departure from 1981-2010 Normals**  
April 01, 2016 to October 31, 2016



*Figure 1. Departure from normal precipitation across Kansas April through October 2016. Most the state was near to above normal, with the southeast quarter well above normal especially around the Wichita area.*

**Average Temperature (°F): Departure from 1981-2010 Normals**  
January 01, 2016 to October 31, 2016



*Figure 2. Departure from normal average temperatures across Kansas January through October 2016. Most the state has been warmer than normal, with pockets well above normal.*

In the precipitation department, many locations have reported above normal precipitation since spring. In fact, numerous areas are at least four to eight inches wetter than normal since April with a large handful of sites greater than eight to twelve inches above normal. The wettest areas have been over generally the southeast quarter of Kansas with a handful of sites twenty to twenty-five inches wetter than normal since April especially within about a 50 mile radius of Wichita. Two months were ranked in or near the top-ten wettest across the Sunflower State since records began in the 1890s, including April (2<sup>nd</sup> wettest) and August (11<sup>th</sup> wettest). Oddly, three months tallied below normal precipitation statewide: March, June and October. Wichita has experienced it's 2<sup>nd</sup> wettest January through October period on record (since 1889), tallying a staggering 49.68 inches at Eisenhower National Airport.

## Rare July Tornadoes Strike Southeast Kansas

By: *Eric Schminke—Meteorologist*



*Tornado illuminated by cloud-to-ground lightning as it moved across Eureka, KS. Photo courtesy of Jason Keller (@jasonkellerpt).*

As all know, Kansas is located close to the heart of “Tornado Alley” and while tornadoes in Kansas are most common in the spring, reaching a peak from mid-May until mid-June, these malevolent intruders have been known to strike any time of the year, even late in the winter.

In the 25-year period encompassing 1991-2015, Kansas has averaged 8 tornadoes in July. Moreover, since 1950 only 4 F3/EF3 tornadoes have struck Kansas in July. No F4/EF4 or F5/EF5 tornadoes have ever occurred during this month. Keep these statistics in mind as you read

further.

On July 7<sup>th</sup> a dangerous but rare severe weather event occurred in parts of southeast Kansas. In the evening 4 tornadoes struck Greenwood County. One was rated an EF3 (rotational velocities from 136-165 mph) while a second received an EF2 rating (rotational velocities from 111-135 mph). There were no injuries or fatalities.

### **Meteorological Setup:**

Late that afternoon, weak low pressure was centered over south central Kansas. From the low’s center, a weak surface trough extended east/northeast toward east-central Kansas. Over the July 4<sup>th</sup> weekend, numerous thunderstorms had produced very heavy rains across the region to result in a moisture-rich environment. On the afternoon of the 7<sup>th</sup> when temperatures reached around 90 degrees, the moisture-rich air mass quickly and dramatically destabilized. Furthermore, south central and southeast Kansas were positioned very close to a westerly jet stream maximum of about 50 knots (nearly 60 mph) that combined with a south to southeast surface flow of 10-15 mph to produce strong, deep-layer wind shear especially directional. All of these parameters would combine with convergence occurring along the surface trough to cause a thunderstorm to erupt over Chase, Greenwood, and Lyon counties around 815 PM CDT. More thunderstorms would erupt in the immediate vicinity and quickly increase and intensify as they built southward.

### **Chronology Of Events:**

**831 PM CDT:** A Significant Weather Advisory is issued for northeast Greenwood and northwest Woodson counties to alert of nickel-sized hail and winds around 50 mph. The thunderstorms were moving east around 40 mph. Development was so explosive that within 10 minutes, the National Weather Service would go from issuing the Significant Weather Advisory directly to a Tornado Warning as not only was the development and intensification so dramatic, but the thunderstorm exhibited rapidly increasing rotation.



**840 PM CDT:** The first Tornado Warning is issued for southeast Chase and northern Greenwood counties that would be in effect until 930 PM CDT. The warning specifically mentions Madison and Hamilton.

**853 PM CDT:** The first tornado is reported 7 miles north/northwest of Thrall and lasted only 15 seconds. The twister would receive an EF0 rating.

About this time, the now tornadic thunderstorm has taken a sharp right turn and is moving southeast toward Eureka. It is unmistakably super-cellular. The situation for Greenwood County is increasingly ominous. **906 PM CDT:** The second Tornado Warning is issued for East-Central Butler and Western Greenwood Counties effective until 945 PM CDT. **The Tornado Warning specifically mentions Eureka with a forecast arrival time of 930 PM CDT.**

**915 PM CDT:** The second tornado is reported 13 miles northwest of Eureka. A damage survey team determined that the vortex was just shy of achieving EF4 intensity. It would become only the 5<sup>th</sup> F3/EF3 tornado to strike Kansas in July and only the second such July tornado since July 20<sup>th</sup>, 1958. The vortex was *massive* as it was *nearly 2/3 of a mile wide*. The wedge tornado's track was 6.7 miles long. A home 10 miles northwest of Eureka was leveled. It is extremely fortunate that no one was at the home when it was hit.

**942 PM CDT:** As the 2<sup>nd</sup> tornado weakens, the third tornado rapidly develops and is then confirmed 6 miles northwest of Eureka. It was moving southeast around 40 mph and would hit Eureka very soon. The third Tornado Warning is issued and contains the following call-to-action statement: **Residents of Eureka should take cover immediately!**

**948 PM CDT:** The tornado hits Eureka. Transformers are hit causing power flashes. Houses are badly damaged on the north side of town where a mobile home is flipped and destroyed. The nursing home is also damaged. The southeast-moving tornado cuts a 3.67 mile long, 150-yard wide track through the center of town.

**950 PM CDT:** The Eureka tornado lifts.

**1027 PM CDT:** The 4<sup>th</sup> and final Tornado Warning is issued and affects parts of 4 southeast Kansas counties. Among them is southeast Greenwood County. At 1041 PM CDT, the 4<sup>th</sup> tornado is reported 2 miles west of Coyville in extreme northwest Wilson County. Fortunately, this was a "little guy" of very short duration.



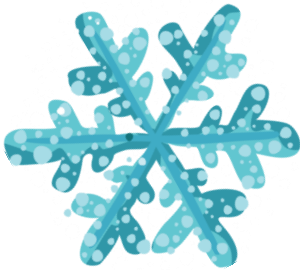
*The remains of a residence that sustained a direct hit. Note the significant tree damage as well. Photo courtesy of NWS Wichita damage survey.*

\* Exact times may not be accurate.

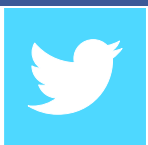
#### **Summary:**

In all, the tornado damaged or destroyed 152 structures. Of this total, 31 homes were destroyed, 23 homes sustained major damage, 32 received minor damage and 4 mobile homes were leveled. Damage to Eureka totaled \$3.8 million. There were no injuries or fatalities.

**Here are some snowfall statistics to get everyone ready for the Winter Season!**



<b>Wichita Snowfall Statistics</b>	
Earliest measurable snow ( $\geq 0.1''$ )	Oct. 22, 1996
Average first measurable snow	Dec. 2
Average last measurable snow	Mar. 9
Latest measurable snow	Apr. 23, 2013
Earliest 1'' snow	Oct. 28, 1905
Average first 1'' snow	Dec. 18
Average last 1'' snow	Feb. 18
Latest 1'' snow	Apr. 18, 1997
<b>When did Wichita see record snows?</b>	
Snowiest season on record (Sept – May)	39.7'' Winter 1911-1912
Snowiest month on record	21.2'' in Feb. 2013
Snowiest day on record	12.0'' on Jan. 18, 1962 12.0'' on Mar. 9, 1909
Snowiest event	15.0'' January 17-18 <sup>th</sup> , 1962



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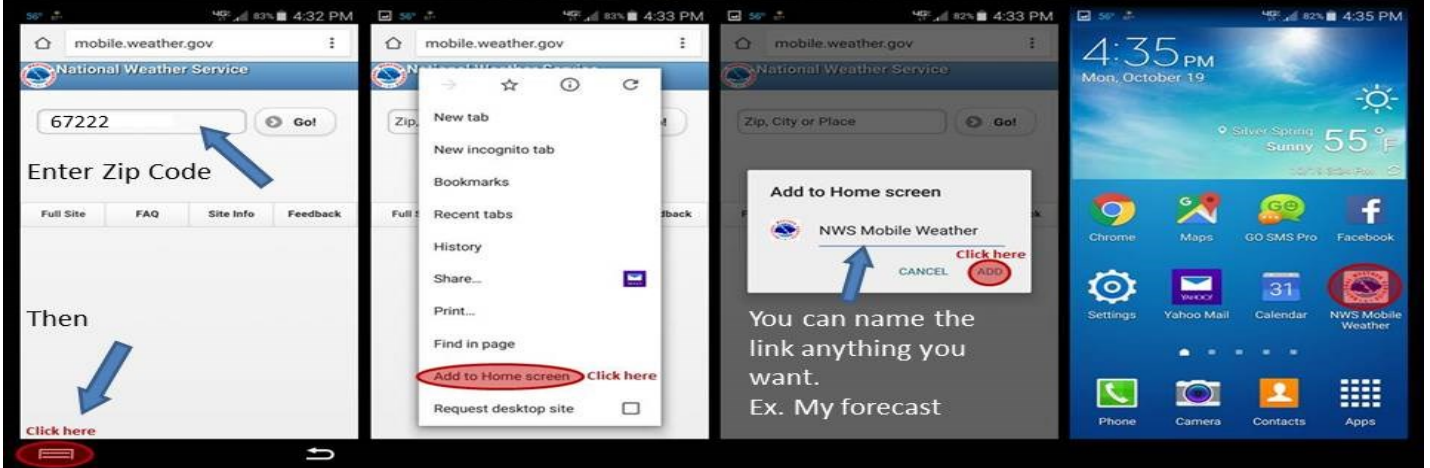
Twitter: [@NWSWichita](#)

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# How to get weather.gov on your mobile device

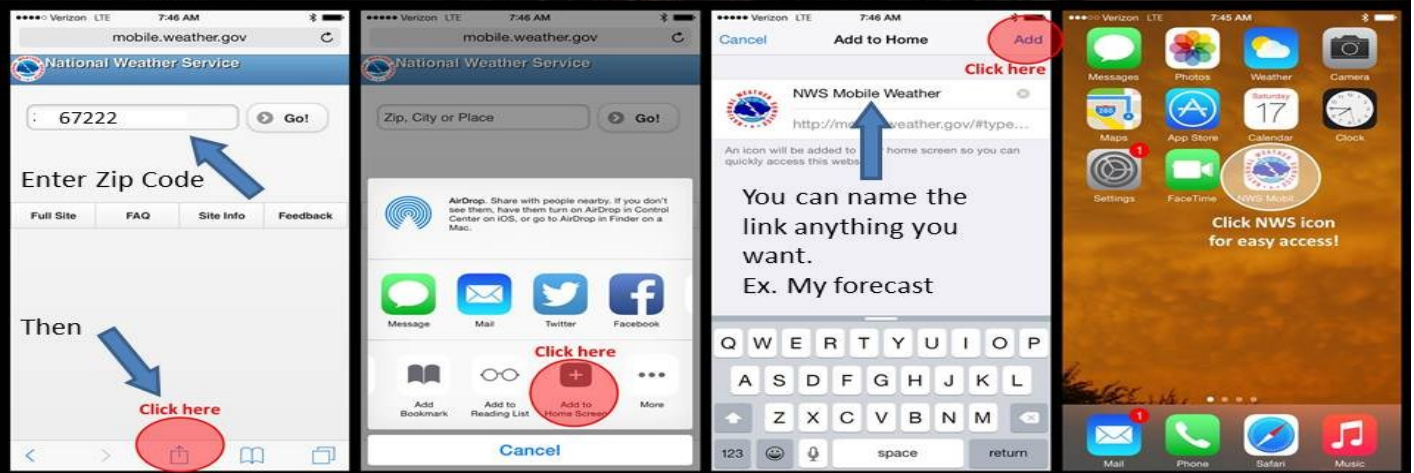
- Visit mobile.weather.gov using Chrome
- Enter Zip code hit go
- Then click the menu button after the forecast loads
- Choose "Add to home screen."
- Change name if desired
- Click Add

## Weather.gov on Your Android



- Using Safari on your iPhone.
- Go to mobile.weather.gov
- Enter your zip code and hit go.
- Then click the send button at the bottom.
- Choose "Add to Home Screen"
- Edit the Name
- Click Add

## Weather.gov on Your iPhone



## Meet our Service Hydrologist—Janet Salazar



Janet was born and raised in Omaha, Nebraska. Janet's captivation with severe weather was early on when in May 1975, the infamous Omaha Tornado Outbreak tore through her city. She remembers the sky turning black, tornado sirens blaring, and gathering all her collection of stuffed animals and going to the basement. On many instances when heading to the basement was warranted, her mom liked to watch out the kitchen window upstairs while Janet would call for her mom to get to the basement. This sparked Janet's interest in wanting to know how and why these tornadoes form. Now it's Janet who has turned to looking at the skies during severe weather before heading to the basement.

While obtaining a Bachelor of Science Degree in Meteorology from the University of Nebraska—Lincoln, she worked for the university at the Department of Agricultural Meteorology in which she helped install and maintain 48 automated weather stations located throughout the state of Nebraska. After graduation, her first professional job assignment was at the National Weather Service in Columbia, MO. After a short stint in Columbia, she then went on to being the radar meteorologist with the North Dakota Rain Modification Project for a summer. She directed pilots to the best possible areas to cloud seed for hail suppression and rain enhancement. Following this, she attended graduate school for two semesters for Geographical Information System but then decided being employed was more appealing. She returned to the National Weather Service at the Huntington, WV Weather Service Office. This is where her interest in hydrometeorology came into play while working many flash flood events in the foothills of the Appalachian Mountains. She was then transferred to the Wilmington, NC Weather Forecast Office, as the Huntington office spun down. After her 3 years of interning as a meteorologist at the two weather offices, she was promoted to a Hydrologic Forecaster at the River Forecast Center in New Orleans, LA. Prior to coming to Wichita, KS she spent six years down south.

Since 2002, Janet has served as the Service Hydrologist at the NWS Wichita Forecast Office. She serves as the "resident expert" on WFO hydrometeorological technologies as they relate to hydrologic forecast problems. Along with this, she provides hydrologic training to the WFO forecasters as well as gives presentations on the dangers of flooding to the public. Other duties include completing field work to keep hydro databases on river gages up to date. She also coordinates with our NWS River Forecast Centers, U.S. Geological Survey, U.S. Corps of Engineers, and local emergency managers during critical flood events and to make any changes in river gauges. She participates in flood damage assessments as well as prepares flood reports and monthly reports of river and flood conditions for the warning area.

Extra activities she is involved with outside of work include: volunteering at the local zoo for special events, singing in her church choir and gardening. She enjoys astronomy, the latest sci-fi flick, and when has some spare time likes to read Robert Heinlein novels. Most of her time is taken raising two handsome teenage boys on her own and attending their sports activities. One of these is tennis. Janet played high school tennis and passed on this love for the sport to her sons. She has played tennis with her sons since they were old enough to hold a racket at an early age of 2. Now it's her sons that are wiping up the tennis courts with their opponents.

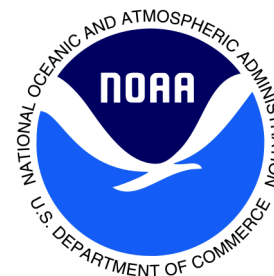


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“The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information, database and infrastructure which can be used by other government agencies, the private sector, the public, and the global community.”



**Online: [www.weather.gov/Wichita](http://www.weather.gov/Wichita)**

## Winter poems

### *Snowball*

I made myself a snowball  
As perfect as could be.  
I thought I'd keep it as a pet  
And let it sleep with me.  
I made it some pajamas  
And a pillow for its head.  
Then last night it ran away,  
But first-it wet the bed.

-Shel Silverstein

Let us walk in the white snow  
In a soundless space:  
With footsteps quiet and slow.  
At a tranquil pace.  
Under veils of white lace.

We shall walk in velvet shoes  
Wherever we go  
Silence will fall like dews  
On white silence below.  
We shall walk in the snow.

-Elinor Wylie from *Velvet Shoes*

# Got any ideas for articles? Let us know!

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