Bulldog Roofing, Inc.

Prepared For:

Mr. John Williams
1315 Smoky Hill Drive
Hays, KS
67601

Claim Number: ABC-123.c
Date of Report: 01-17-2018

HailStrike
4011 W Plano Pkwy
Suite #105
Plano, TX 75093

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Report No. 17692

Property Owner Information

Property Owner: **Mr. John Williams**
Address: **1315 Smoky Hill Drive**
City: **Hays**
State: **KS**
Zip: **67601**
Phone: **(555) 123-4567**

Report Information

Report Date: **01-17-2018**
Ins. Carrier: **National Risk**
Claim No: **ABC-123.c**
Subdivision: **Whiffletree**

Storm Detail

Date: **06-15-2017 6:07 AM** *Duration: **00:40** Est. Max Hail Size: **2.25"**
Max Intensity: **7.5** Storm Speed: **16 MPH** Storm Direction: **SE**

* Duration refers to the time the storm was over the point, rather than the overall length of the storm.

Property Information

Est Value:
Property Age: **12** Elevation: **2062 ft**
County: **Ellis** Roof Age: **4** Roof Type: **Comp-3Tab**

Historical Storm Activity At Location — Elevation: 2062 ft — Lat: 38.9014 Lon: -99.3433

All times in the America/Chicago time zone

Date of Storm	Duration (h:m)	Est. Max Hail Size	Intensity	Station ID	Storm Speed (MPH)	Storm Direction
10-06-2017	00:04	1.00"	3.5	KICT	40	ENE
08-15-2017	00:04	1.00"	3.5	KDDC	41	ESE
08-09-2017	00:08	2.25"	7.5	KGLD	19	SSE
08-09-2017	00:04	2.25"	6.5	KICT	23	SE
08-09-2017	00:08	2.25"	10.0	KUEX	27	SSE
06-15-2017	00:08	2.25"	4.5	KDDC	15	SE
06-15-2017	00:28	2.25"	9.5	KUEX	15	SE
06-15-2017	00:16	2.25"	7.5	KGLD	10	SE
06-15-2017	00:40	2.25"	7.5	KICT	16	SE
05-25-2017	00:04	1.50"	5.5	KICT	43	E
05-25-2017	00:04	1.50"	5.5	KUEX	38	E
05-25-2017	00:04	1.50"	6.5	KDDC	39	E
04-12-2017	00:04	1.25"	6.5	KICT	11	ESE
04-12-2017	00:16	1.25"	6.5	KGLD	14	ESE
04-12-2017	00:08	1.25"	8.5	KDDC	13	ESE

04-12-2017	00:12	1.25"	10.0	KUEX	14	ESE
06-25-2016	00:04	1.00"	4.5	KICT	9	NE
06-25-2016	00:04	1.00"	4.5	KUEX	12	ENE
06-25-2016	00:04	1.00"	4.5	KGLD	24	E
06-25-2016	00:04	1.00"	4.5	KDDC	17	E
05-24-2016	00:04	1.00"	4.5	KUEX	25	N
05-24-2016	00:04	1.00"	4.5	KGLD	29	ENE
05-08-2016	00:04	1.00"	3.5	KUEX	34	ENE
05-08-2016	00:04	1.00"	4.5	KICT	35	ENE
05-07-2016	00:04	1.00"	5.5	KGLD	34	NNE
09-10-2015	00:04	1.50"	6.5	KDDC	25	SE
09-10-2015	00:04	1.50"	5.5	KGLD	11	SSE
09-10-2015	00:04	1.50"	5.5	KICT	20	ESE
07-14-2015	00:04	1.25"	3.5	KUEX	17	S
05-07-2015	00:04	1.00"	3.5	KICT	21	NNE
07-09-2014	00:04	1.00"	4.5	KDDC	17	SSE
07-09-2014	00:04	1.00"	4.5	KUEX	22	S
06-05-2014	00:04	1.25"	3.5	KUEX	38	E
06-01-2014	00:12	1.00"	5.5	KICT	41	ESE
06-01-2014	00:04	1.00"	7.5	KGLD	34	ESE
07-27-2013	00:12	1.00"	5.5	KUEX	33	SE
06-16-2013	00:04	1.00"	3.5	KUEX	20	SE
05-18-2013	00:16	2.25"	4.5	KICT	19	NE
05-18-2013	00:08	2.25"	4.5	KUEX	27	NE
05-18-2013	00:08	2.25"	4.5	KDDC	27	NE
05-18-2013	00:08	2.25"	4.5	KGLD	26	ENE
05-08-2013	00:12	1.50"	6.5	KICT	16	ENE
05-30-2012	00:08	1.25"	8.5	KICT	33	ESE
05-30-2012	00:08	1.25"	5.5	KDDC	29	NE
05-30-2012	00:12	1.25"	5.5	KGLD	21	ESE
05-30-2012	00:04	1.25"	4.5	KUEX	22	SSE
05-27-2012	00:08	0.75"	5.5	KUEX	53	ENE
05-27-2012	00:04	0.75"	3.5	KICT	39	ENE
05-27-2012	00:08	0.75"	3.5	KGLD	60	NNE
05-27-2012	00:04	0.75"	5.5	KDDC	39	ENE
05-25-2012	00:04	0.75"	3.5	KDDC	14	ENE
05-25-2012	00:04	0.75"	4.5	KICT	13	NE
04-26-2012	00:04	1.25"	4.5	KICT	48	NNE

04-26-2012	00:04	1.25"	8.5	KUEX	57	N
04-02-2012	00:04	1.00"	4.5	KUEX	28	SSE
08-09-2011	00:16	1.75"	8.5	KDDC	34	ESE
08-09-2011	00:16	1.75"	8.5	KICT	29	ESE
08-09-2011	00:16	1.75"	6.5	KGLD	32	ESE
08-09-2011	00:20	1.75"	9.5	KUEX	32	ESE

Stations considered in creating this OneSite: KICT KDDC KGLD KUEX

Comprehensive data has been used to assemble this report, including several unique calculations and patented technology to completely detail the storm area affected. We accumulate and compile reporting data from various sources including, but not limited to: National Weather Service ("NWS"), the Storm Prediction Center ("SPC"), the National Climatic Data Center ("NCDC"), internet sources, and other credible resources.

For any further definition of the technology used in this report, please contact the offices of Dynamic Weather Solutions directly. By ordering or otherwise utilizing this report the user agrees to abide by our terms and conditions as outlined in our license agreement which can be found online at onesitereport.com/EULA

Swath Details

Report Date: 01-17-2018 Report Number: 17692

Our patented Derived Hail Index (DHI) produces a colorized graph similar to a heat map. However, rather than temperatures, its differing colors represent the storms' varying severe hail intensities. The "Intensity Scale" to the side of the image shows darker purple colors representing lower intensity of severe hail, while the yellow and higher white colors depict higher intensities. The DHI calculation is comprised of not only the size, but also the amount of hail activity. This high definition data comes directly from the network of 160 NEXRAD WSR-88D radars using dual polarization technologies across the continental United States. The round colored markers represent the maximum hail size at that point.

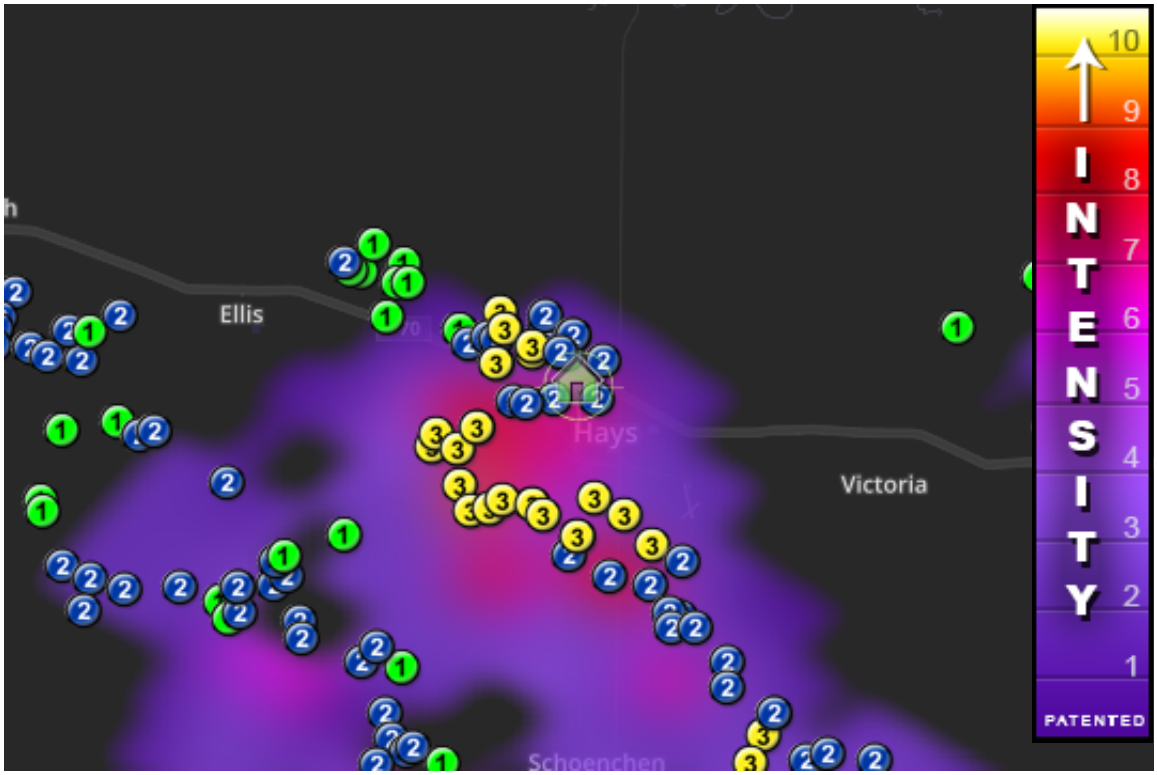
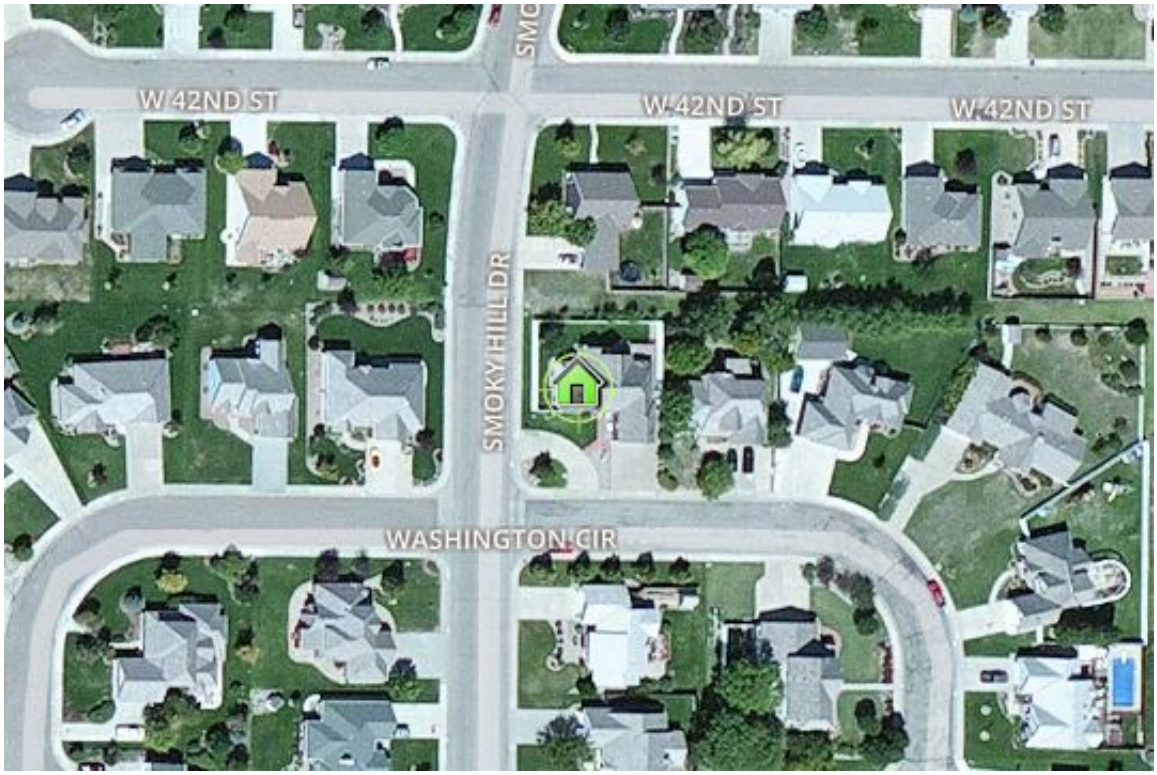


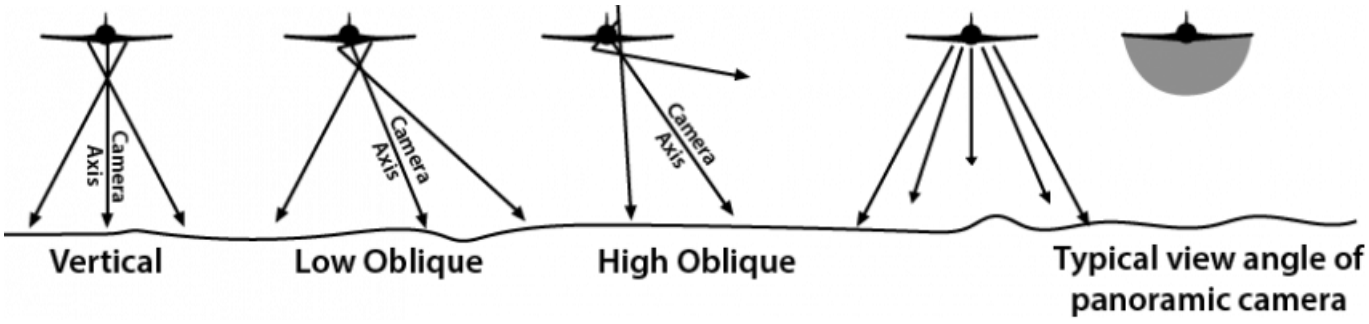
Image: Swath Detail at ~ 30 X 45 miles out

Aerial Details

Report Date: 01-17-2018 Report Number: 17692



OneSite accesses information from Geographic Information Systems (GIS) and aerial photography databases to accurately pinpoint the exact location of the asset being analyzed. OneSite uses this detailed satellite imagery, maintained by the United States Geological Survey (USGS), to verify correct location (Latitude and Longitude.) The small house icon centered on the map above represents the exact location.

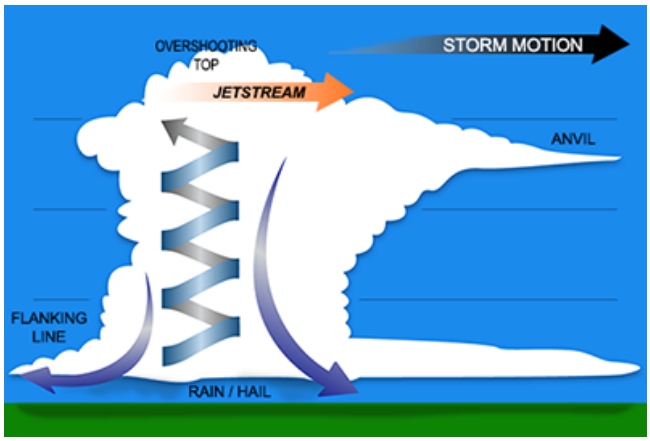


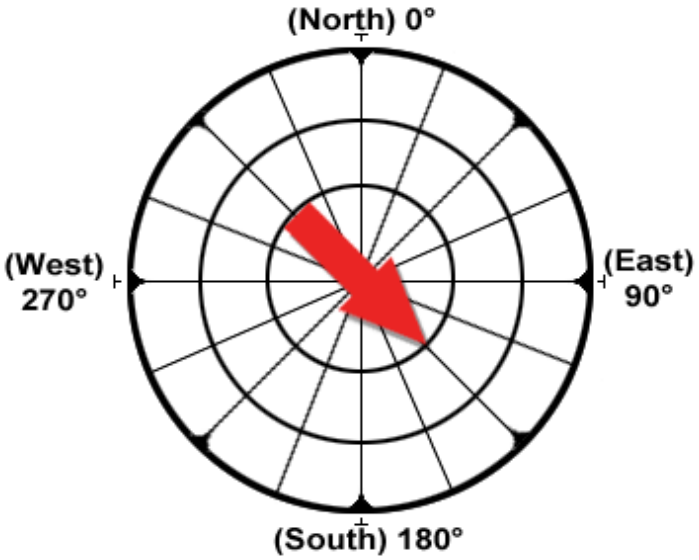
Storm Direction

Report Date: 01-17-2018 Report Number: 17692

Wind speed, direction and gusts play a big part in determining where hail stones make land strike. Within a super cell, wind may vary in direction and speed at several levels throughout the storm cloud. We calculate the storm's overall direction as it was affected by the wind.

THIS STORM WAS HEADED: South East





Beaufort No.	Description	Wind	Land Conditions
0	Calm	< 1	Calm, smoke rises vertically
1	Light air	1-2	Wind motion visible in smoke
2	Light breeze	3-6	Wind felt on exposed skin. Leaves rustle.
3	Gentle breeze	7-10	Leaves and smaller twigs in constant motion.
4	Moderate breeze	11-15	Dust and loose paper raised. Small branches begin to move.
5	Fresh breeze	16-20	Branches of a moderate size move. Small trees begin to sway
6	Strong breeze	21-26	Large branches in motion. Whistling heard in overhead wires.
7	High Wind, Gale	27-33	Whole trees in motion. Effort needed to walk against the wind.
8	Fresh gale	34-40	Some twigs broken from trees. Cars veer on road.
9	Strong gale	41-47	Some branches break off trees, and some small trees blow over.
10	Whole gale	48-55	Trees are broken off or uprooted, saplings bent and deformed.
11	Violent storm	56-63	Widespread vegetable damage. Many roofing surfaces are damaged.
12	Hurricane	> 64	Very widespread damage to vegetation. Some windows may break.

Terminology and Technology

Intensity Scale - The Report's most complex calculation, this scale is based on several data products directly extracted from the NEXRAD radar system. Its high definition values utilize the latest in Dual Polarization technology to calculate our patented algorithm, producing a scale with values from 1 (minimum affect) to 10 (greatest affect). Calculations are based on a complex formula that examines Level III data including a proprietary cross-referencing of radar "products" that the antennas generate approximately every 4-5 minutes (the time for a completed 360 degree rotation of the dish, depending on which scan mode is selected.)

The calculated intensity of a storm refers to the overall force of hail activity produced by a hail cell. Lower registers indicate lesser impact of hailstones, whereas upper registers in the 8-10 (red-white) represent much higher strength. Maximum intensity is the highest strength hail produced over the area selected by the user. Data is measured at the lowest elevation angle possible of 0.6 degrees with a maximum range of 225 nm.

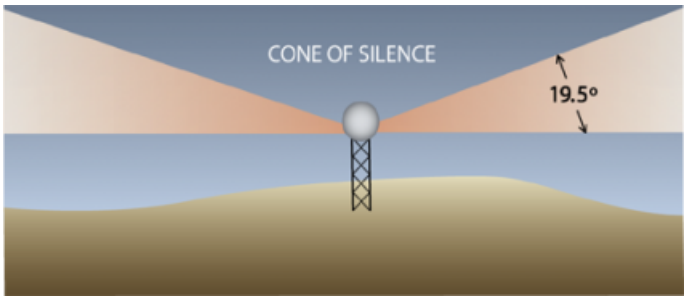
Storm Speed - This value refers to the speed of the overall storm itself. This should not be confused with wind speed or gusts in or around the cell itself.

Max Hail Size - The complex effects of rain, humidity, wind, melt zones and storm-cloud height (not to mention radar's basic physical limitations as seen on the Technology Page's Radar Elevation angles), makes it difficult to accurately portray the size of hailstones as they hit the ground. This size calculation is a result of processing by the radar's internal software, after which the data is harvested by the array of data servers maintained by HailStrike. Then the collected data is used to generate the intensity scale which this OneSite report references.

Duration - This is calculated from the time the storm develops in or near the area, until the storm has passed or is no longer affecting the area. Several additional factors are being considered at this time; such as its overall size, speed, and intensity. A lower strength storm will not register once it falls below a specified threshold even if the storm continues in its weaker state.

Storm Direction - The red arrow within the compass displays the direction the storm travelled. This is not the wind direction, as wind can blow virtually in any direction as the storm moves from point to point.

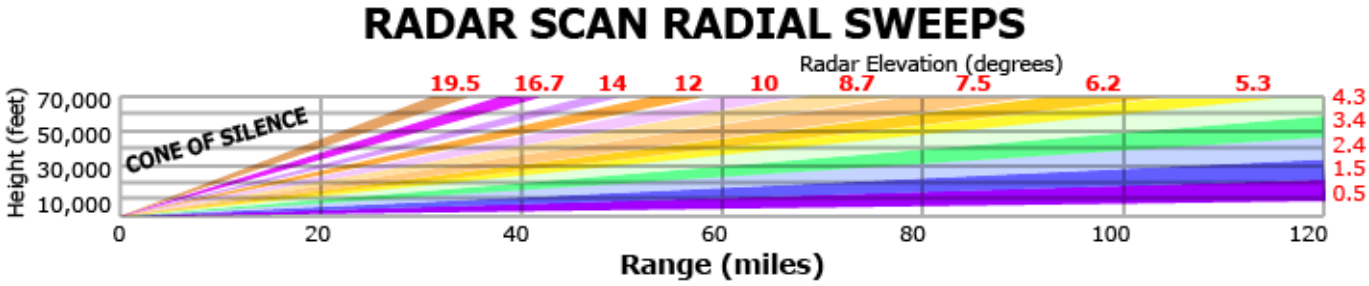
HailStrike uses Level III NEXRAD radar data from NOAA to plot a series of markers (path points) which represent significant activity within super cell storm clouds containing hail signatures. Each marker has a numerical designation which shows the approximated maximum size of the hail stones that is expected to have hit the ground at or near the marker. The maximum size of hail is a probabilistic result of several factors which are calculated together by NOAA.



The weather radar you see on your local TV news or The Weather Channel is Doppler radar. Doppler radar emits beams (pulses) of microwave energy from a transmitter into the atmosphere. When these beams collide with objects in the atmosphere such as raindrops or hail stones, some of that energy bounces back towards the radar. A receiver on the radar then displays the data in different ways. Doppler radar came into common use when the Weather Surveillance Radar – 1988 Doppler radar (WSR-88D) was installed. Currently, over 160 such WSR-88Ds operate around the United States and other U.S. territories. They are part of a network of Doppler radars called NEXRAD, which stands for NEXt generation RADar. All radar sites in the lower 48 U.S. states are given a four-letter call number starting with "K."

When you see a radar image on TV, you are likely looking at a combination of individual Doppler radars or a section of the NEXRAD network. Why is this? An individual radar sits inside a dome resting on a tower almost 100 feet in the air. As the transmitter on the radar emits beams of microwave energy, it also rotates in all horizontal directions and sends energy to every part of the lower atmosphere. Given the analog structure of the radar, beams can only be transmitted to a certain distance. HailStrike disregards the scan's farther extremities, as it is largely unreliable or innaccurate data. All data is measured at the lowest elevation angle possible of 0.6 degrees with a maximum range of 225 nm.

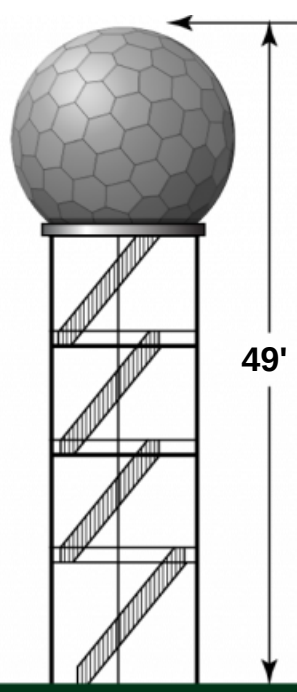
Terminology and Technology



NEXRAD radars emit a powerful linear beam from their dome-shaped housing, but the beam's direction cannot be totally vertical—therefore producing what is known as a "Cone of Silence." This Cone is commonly observed when looking at a single radar station's data. However, the cone can be "filled in" by using a neighboring station's data to provide a complete picture of the storm cell.

HailStrike has taken advantage of recent upgrades which NOAA (National Oceanic Atmospheric Administration) has performed on all of their NEXRAD radar stations —referred to as "Dual Polarization." In essence, the modification (both hardware and software) has doubled the radars' resolution and vastly increased its number of monitored data points. HailStrike collects and stores all of this information, allowing our users to display, filter, and perform reports based on this data.

NEXRAD RADAR USED FOR THIS REPORT: KICT



Line of Sight: 8.6 Miles

WSR-88D Station Details

Site Name:	WICHITA	Region:	Central
SID:	ICT	In Service:	4/20/1994
Serial Num:	RDA-002	Wave Length:	S band (10.0-11.1 cm)
TODO:	WR9450	Frequency:	2.8-3.0 GHz
CLIN:	01IP	Peak Power:	809 kW
Sys No:	12	Ant. Diameter:	8.5 m (28 ft)
Radar ID:	ICT	Beam Width:	0.95°
ICAO:	KICT	Rotation Rate:	36° per sec
County:	SEDGWICK	Pulse Length:	1.57 and 4.7 micro sec
State:	KS	Gain:	104 dB
Latitude:	37.655	Longitude:	-97.443

Elevation: 1335'

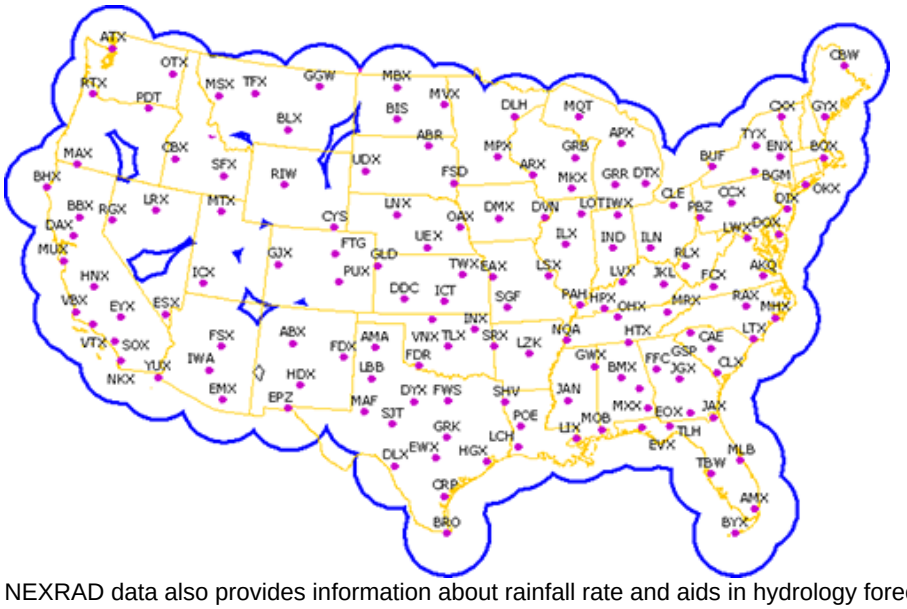
Other reporting stations considered: KDDC, KGLD, KUEX

Radar Details

Report Date: 01-17-2018 Report Number: 17692

NEXRAD or Nexrad (Next-Generation Radar) is a network of 160 high-resolution S-band Doppler weather radars operated by three federal entities—the National Weather Service (an agency of the National Oceanic and Atmospheric Administration, or NOAA, within the United States Department of Commerce), the Federal Aviation Administration within the Department of Transportation, and the US Air Force within the Department of Defense.

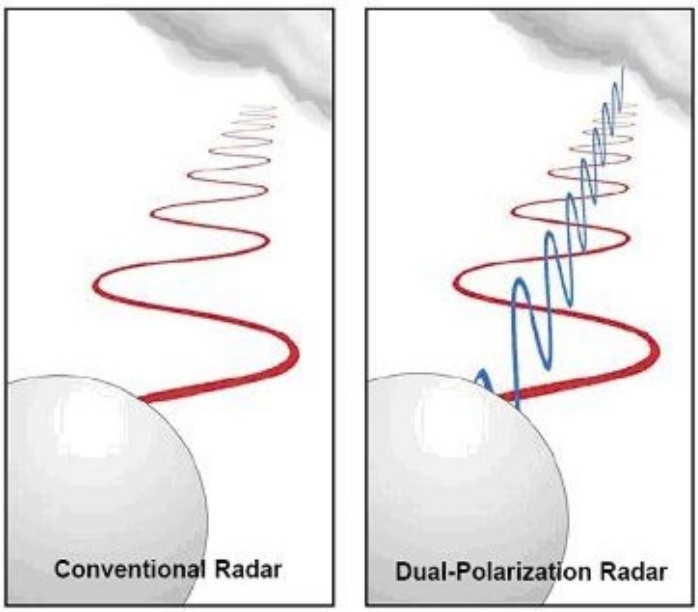
NEXRAD's technical name is WSR-88D, which stands for Weather Surveillance Radar, 1988, Doppler. NEXRAD detects precipitation and atmospheric movement, or wind. It returns data, which after processing can be displayed in a mosaic map showing patterns of precipitation and movement. The radar system operates in two basic modes, selectable by the operator: a slow-scanning, clear-air mode for analyzing air movements when there is little or no activity in the area, and a precipitation mode with a faster scan for tracking active weather. NEXRAD places an increased emphasis on automation, including the use of algorithms and automated volume scans.



NEXRAD data is used in multiple ways. It is used by National Weather Service meteorologists and is freely available to users outside of the NWS, including researchers, media and private citizens. The primary goal of NEXRAD data collection is to aid NWS meteorologists in operational forecasting. The data allows them to accurately track precipitation and anticipate its development. More importantly, it allows the meteorologists to track severe weather and tornadoes. Combined with ground reports, tornado and severe thunderstorm warnings can be issued to alert the public about dangerous storms.

NEXRAD data also provides information about rainfall rate and aids in hydrology forecasting. Data is provided to the public in several different forms. The most basic form is graphics published to the NWS website. Data is also available in two similar, but different, raw formats. Level III data is available directly from the NWS. It consists of reduced resolution, low-bandwitdth, base products as well as many derived products. Level II data consists of only the base products, but at their original resolution. Because of the higher bandwidth costs, Level II data is not available directly from the NWS. The NWS distributes this data freely to several top-tier universities, who in turn distribute the data to private organizations.

Dual polarization - WSR-88D sites across the nation were recently upgraded to polarimetric radar, which adds vertical polarization to the previous horizontal radar waves to more accurately identify what is reflecting the signal. This so-called **dual polarization** allows the radar to distinguish between rain, hail and snow, something horizontally polarized radars could not accurately do. Early trials proved that rain, ice pellets, snow, hail, birds, insects, and ground clutter all have different signatures with dual-polarization. This will mark a significant improvement in identifying severe thunderstorms.



The most Preferred solution for comprehensive and accurate weather forensics.

HailStrike is an advanced weather forensics company offering the industries only patented and cross-referenced historical data available in the market today. Founded in 2011 and operating under the Dynamic Weather Solutions umbrella, HailStrike has forged a radically fresh approach to weather forensics. We design tools with the user in mind rather than simply “data-dump” our clients with information that is often hard-to-use, vague and inaccurate. This priority on clients’ ease-of-use makes our data both productive and easily understood.

HailStrike is located in the Dallas, Texas area, which experiences some of the United States’ most severe weather. This location offers us frequent opportunities to verify the accuracy of our reporting software and its complex calculations. We frequently have the opportunity to deploy one of our staff Storm Spotters or weather chasers to physically track a storm using one or more of HailStrike’s tools. Not only does this verify the accuracy of a particular report, but it helps refine our data and ensures that our ever-improving accuracy remains second to none.

OneSite reports are fast becoming acknowledged as valid representations of storm activity. We do not limit our report to the hail’s size relative to a location, or wind’s "gust speed". Our Reports equip you with every available detail about a storm at a precise location—leaving you with valuable data to support your claim. Whether you need data on a particular location, or even long-term historical comparisons, HailStrike provides the investigative, cross-referenced information needed to precisely document activity. When it is critical that you have all the facts available, HailStrike stands alone.

Our development team does not rest on its laurels as an industry pioneer, but constantly strives to refine our inventive tools based on state-of-the-art data sources. HailStrikes speed of reporting has quickly gained an unrivaled reputation. Generally, our timely reports are generated within just a few hours and sometimes even real time— saving you the added expense of "rush" services. With comprehensive tools, services and the only U.S. patented algorithm, HailStrike provides the data without the need to piece together reports from information spread across multiple, non-integrated resources.

Disclaimer

Report Date: 01-17-2018 Report Number: 17692

Dynamic Weather Solutions, Inc. ("DWS") accumulates and compiles reporting data from various sources Including, but not limited to: National Weather Service ("NWS"), the Storm Prediction Center ("SPC"), the National Climatic Data Center ("NCDC"), internet sources, and live witness resources. This report and the reports we provide (the "Content") represent the most accurate representation for storm activity based upon such resources. Although extra steps have been taken to ensure the accuracy of these reports, we cannot guarantee the absolute accuracy of the information being provided, nor can we be held responsible for inaccurate data that we receive, including errors in the reporting sources, the sources' equipment, or the accuracy of their information. DWS specifically disclaims all warranties, express or implied, including without limitation the warranties of merchantability, fitness for a particular purpose, and non-infringement with respect to the Content. In no event will DWS be liable for any general, special, indirect, incidental or consequential damages, even if DWS has been advised of the possibility of such damages.

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Property value estimates
provided by Zillow.

Dedicated to the Memory of

Army Staff Sgt. Christopher J. Vanderhorn

"Greater love has no one other than this,
that he lay down his life for his friends." (John 15:13)

Died January 1, 2006 Serving During Operation Iraqi Freedom

Age 37, of Tacoma, Wash., assigned to the 1st Battalion, 187th Infantry Regiment, 3rd Brigade Combat Team, 101st Airborne Division, Fort Campbell, Ky., killed Jan. 1 when an improvised explosive device detonated near his Humvee during patrol operations in As Sinia, Iraq. Arkansas soldier killed in IraqSPRINGDALE, Ark.

The brave men and women who have made the ultimate sacrifice to preserve liberty for all Americans must never be forgotten. A portion of the proceeds from this report will be donated to the Boot Campaign (www.bootcampaign.com) which is dedicated to promoting patriotism for America and our military community; raising awareness of the unique challenges service members face during service and post-service; and providing assistance to military personnel, past and present, and their families. HailStrike is committed to "those who gave all" by preserving their memory and heroic deeds.