

1. Historical Weather History

In today's world of abundant information, there is usually ample supportive historical weather data to conclude the likelihood of damaging wind in a certain area on a certain day (time).

The NWS is a good source, but there are others.

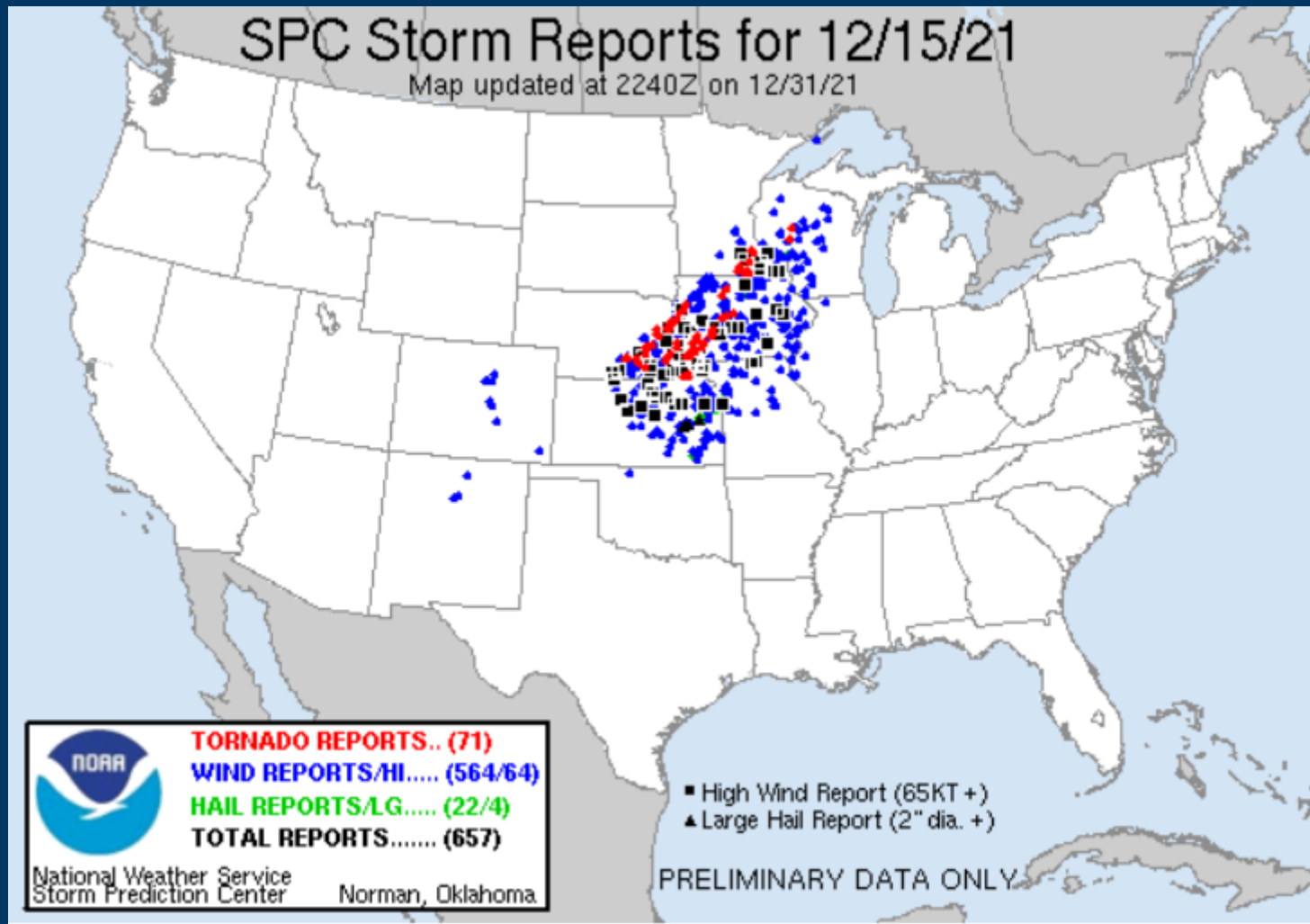


1. Historical Weather History

- News Reports
- National Weather Service Reports
- Radar
- Buoy
- Local Airports (METAR reports)
 - Weather underground
- Companies that provide site specific reports on wind speed
 - Benchmark
 - Corelogic
 - Compuweather



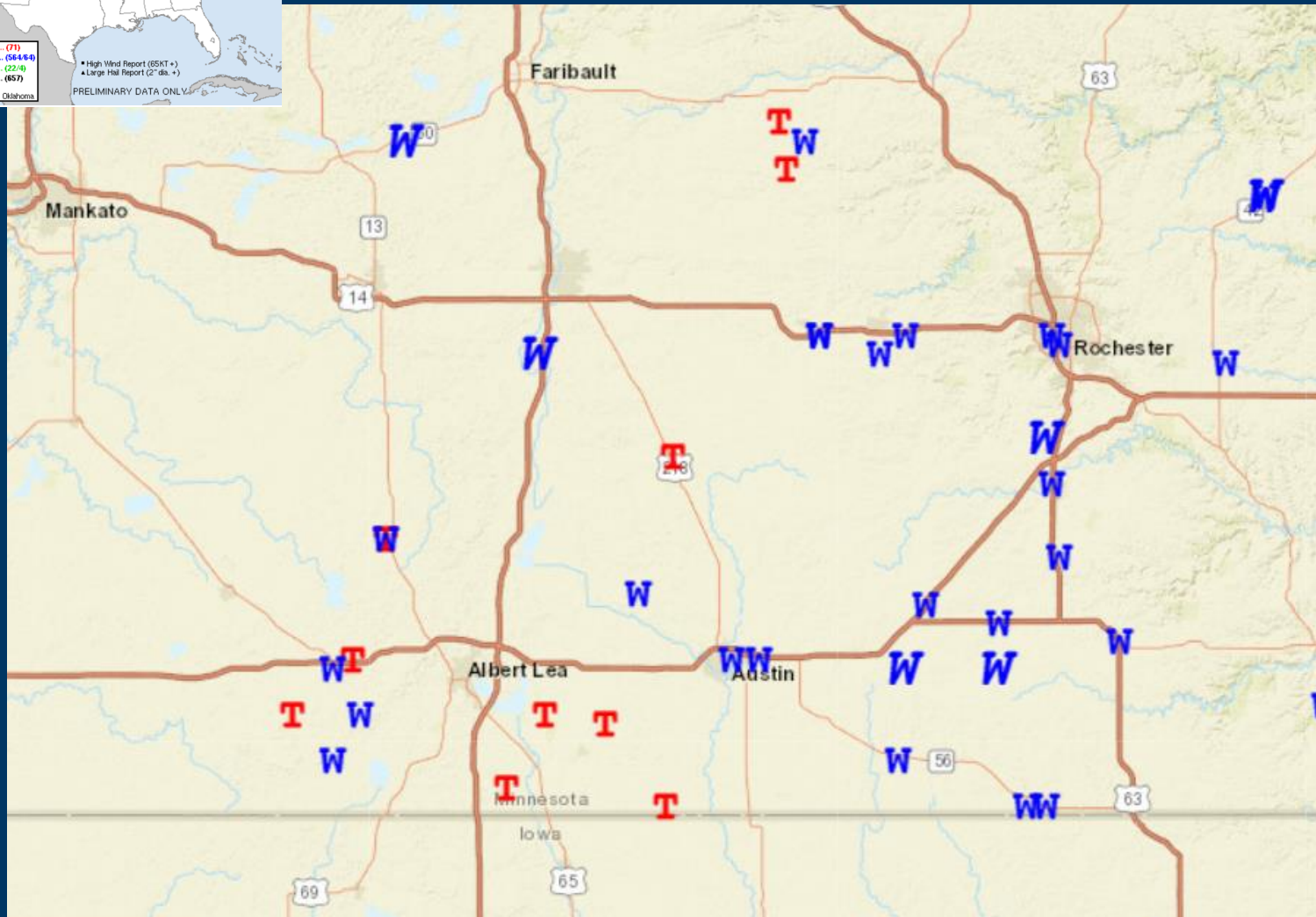
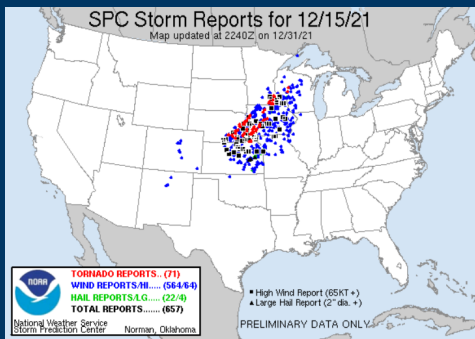
NWS Report



<https://www.spc.noaa.gov/climo/online/>

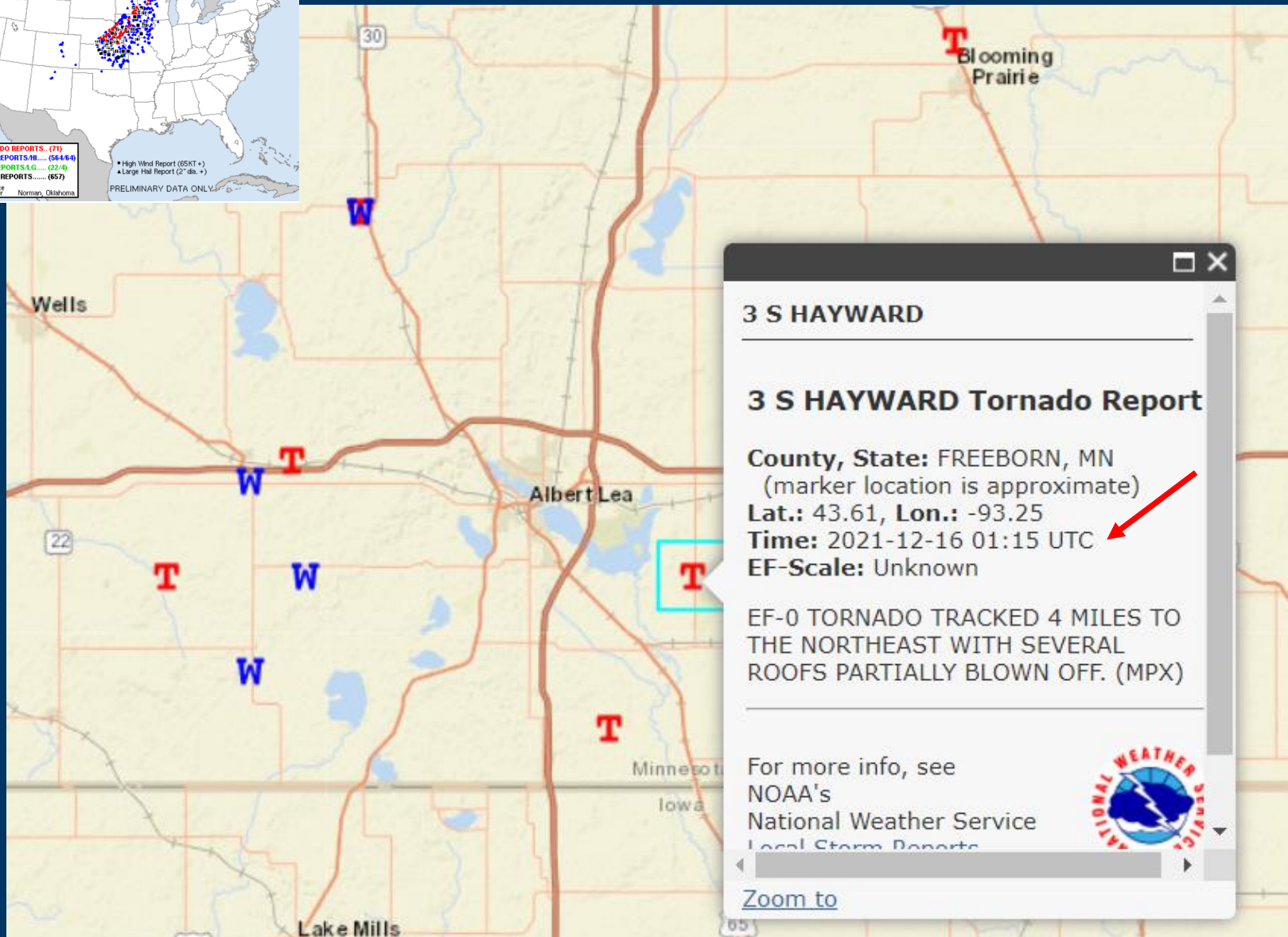
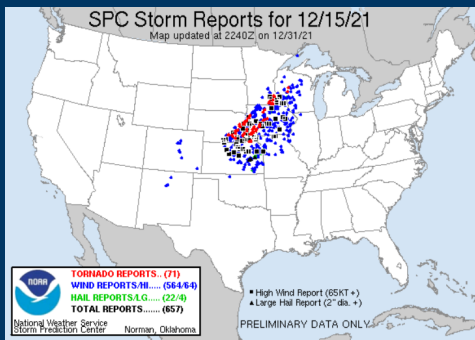


NWS Report



<https://www.spc.noaa.gov/climo/online/>





3 S HAYWARD

3 S HAYWARD Tornado Report

County, State: FREEBORN, MN
 (marker location is approximate)
Lat.: 43.61, **Lon.:** -93.25
Time: 2021-12-16 01:15 UTC
EF-Scale: Unknown

EF-0 TORNADO TRACKED 4 MILES TO THE NORTHEAST WITH SEVERAL ROOFS PARTIALLY BLOWN OFF. (MPX)

For more info, see NOAA's National Weather Service Local Storm Reports

[Zoom to](#)

<https://www.spc.noaa.gov/climo/online/>



Time Zone Conversion

The NWS historical weather radar is presented in UTC time. UTC time is Coordinated Universal Time (UTC). To convert UTC to Central Time Zone (CST) it is important to know if CST is in daylight savings time or not. Daylight saving time in 2021 started on 3/14/2021 and ended on 11/7/2021.

To convert UTC to CST (daylight saving time) subtract 5 hour

To convert UTC to CST (non-daylight saving time) subtract 6 hour

In this case, the tornado was reported at 12/16/2021 at 1:15 (UTC) am. This was not daylight savings time.

Therefore, the central time would have been:

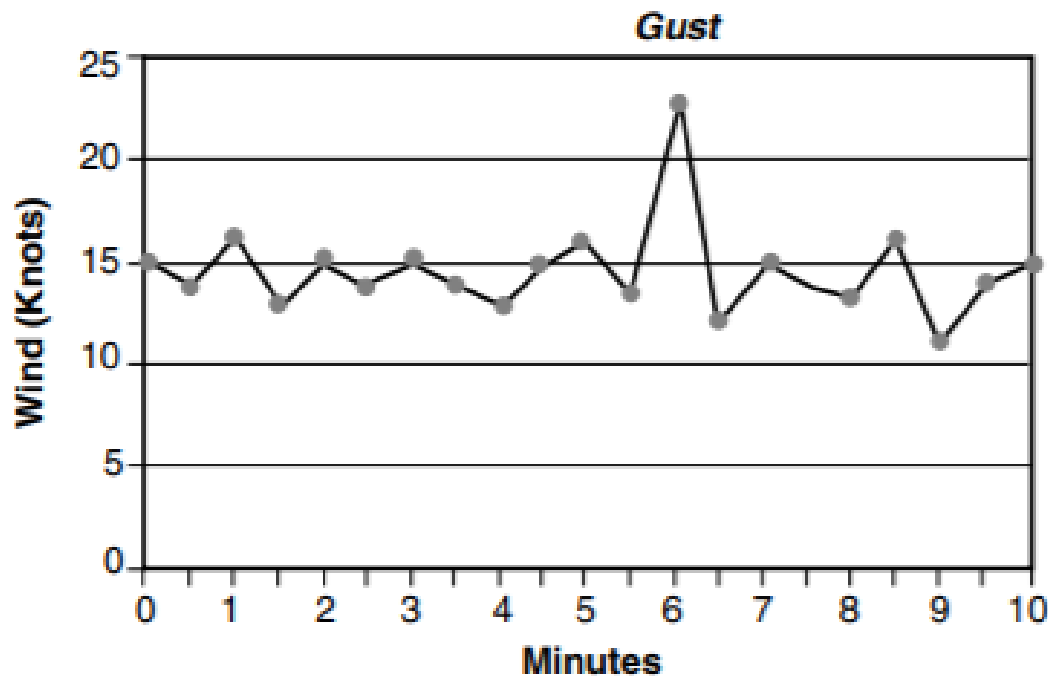
$1:15 \text{ am} - 6 \text{ hours} = 24 + 1:15 - 6 = 19:15 \text{ CST on } 12/15/2021$

7:15 pm



Meteoreological Terminal Air Report (METAR)

Wind Profile Resulting in METAR Report of 15-Knot Wind Velocity And Gusts to 23 Knots



METAR = Aviation routine weather report

Source: Flight Safety Foundation Approach-and-landing Accident
Reduction (ALAR) Task Force





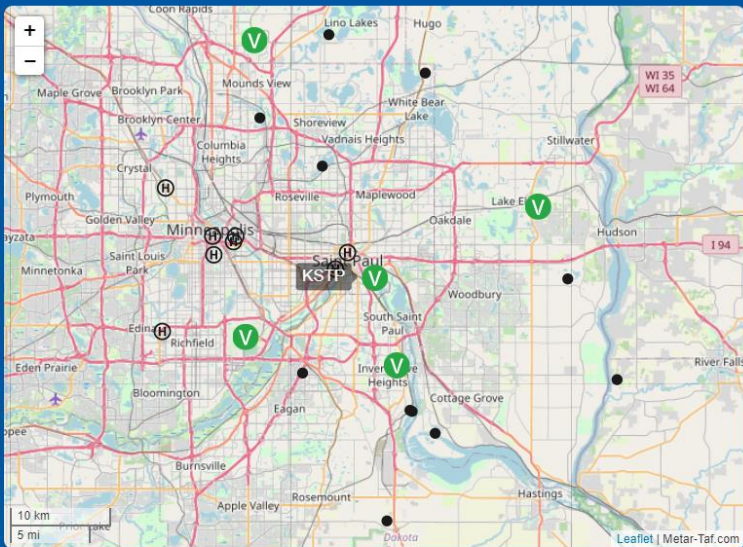
St. Paul Downtown Airport ▾

KSTP

Settings English

METAR TAF History NOTAM Info

Share



Coordinates: 44.9345016, -93.0599976

ICAO	KSTP									
IATA	STP									
City	St. Paul									
Country	United States									
Type	Midsized airport									
Timezone	Chicago (-6 h)									
Local time	Jan 9, 2022 2:20 pm									
Runways	<table border="0"> <tr><td>9/27</td><td>(091°/271°)</td><td></td></tr> <tr><td>13/31</td><td>(128°/308°)</td><td></td></tr> <tr><td>14/32</td><td>(146°/326°)</td><td></td></tr> </table>	9/27	(091°/271°)		13/31	(128°/308°)		14/32	(146°/326°)	
9/27	(091°/271°)									
13/31	(128°/308°)									
14/32	(146°/326°)									

Change Runway

Meteorological Terminal Air Report (METAR)

<https://metar-taf.com/>

<https://www.navlost.eu/metar/about/>



Minneapolis–Saint Paul Internat... ▾

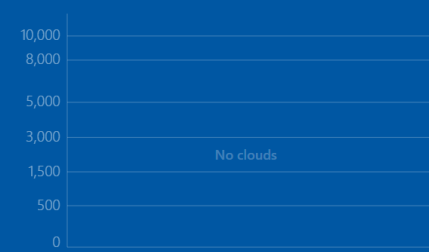
KMSP KMSP ▾

Settings English

METAR TAF History NOTAM Info

35 minutes ago Share

VFR No warnings	5 °F Clear	12-24 kt 290°	10 mi Visibility	No Ceiling	30.47 inHg ☀ 7:49 am 🌙 4:50 pm
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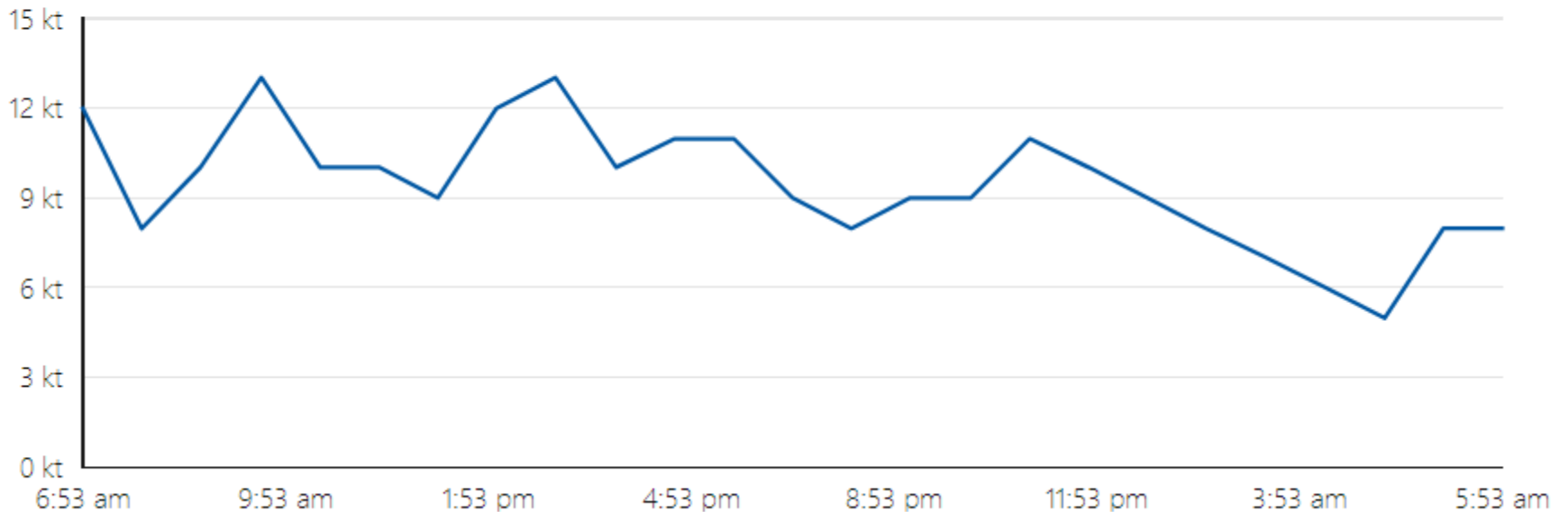
4/22 ← 10 kt	12R/30L → 2 kt	12L/30R → 2 kt	17/35 → 10 kt
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METAR KMSP 091953Z 29012G24KT 10SM CLR M15/M24 A3048 RMK A02 SLP346 T11501239

METAR definition Embed


```
METAR KMSP 101153Z 31008KT 10SM CLR M22/M26 A3058 RMK A02 SLP383 4/005  
T12171261 11178 21222 53010 $
```

Wind speed



This is how you read a METAR

<https://metar-taf.com/explanation>



43.66 °N, 93.37 °W

Albert Lea, MN Weather History

-10° ALBERT LEA MUNI STATION | CHANGE

TODAY

HOURLY

10-DAY

CALENDAR

HISTORY

WUNDERMAP

Daily

Weekly

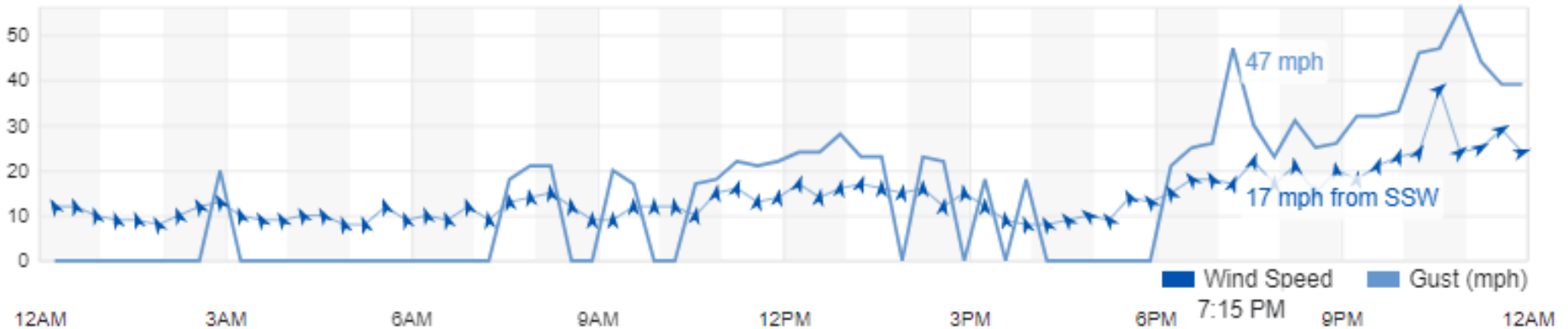
Monthly

December

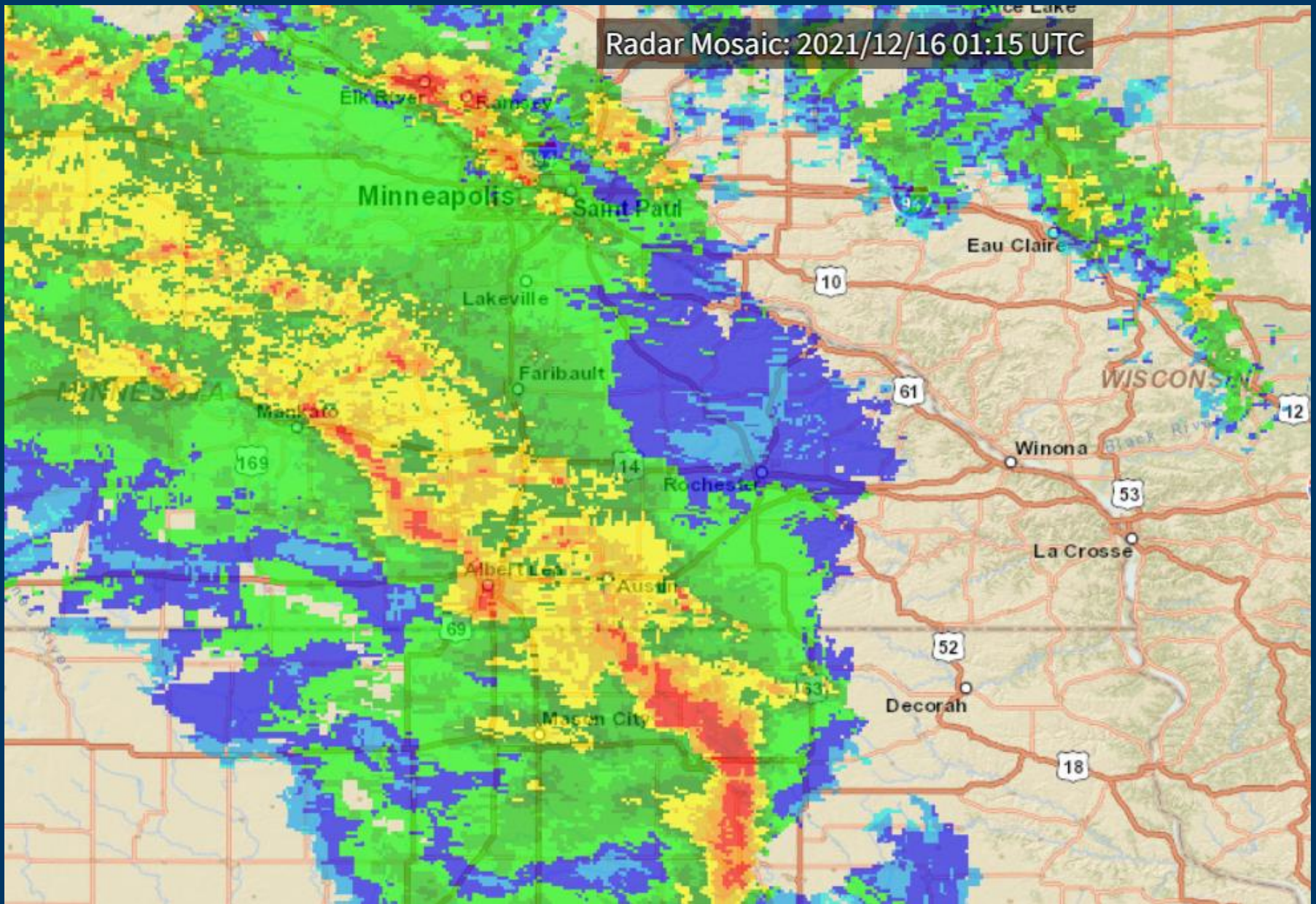
15

2021

View



Radar Mosaic: 2021/12/16 01:15 UTC



<https://www.ncei.noaa.gov/maps/radar/>



Benchmark® Wind History Report

Date of Report February 7, 2019 12:34 CST

Claim Details

Property Address: 13233 Dairy Ashford Rd
Surgarland, TX
ZIP Code: 77478
Claim Number: 999
Date of Loss: 5/12/15
Cause of Loss:
Assignment Date:
Report Period: 01 Jan 2009 - Present

Agent/Adjuster Name:
Company: Safe Haven
Address:
Phone:
Email: cshepard@verisk.com
Latitude: 29.623069
Longitude: -95.60202

Summary: Wind greater than 40 mph did not occur at the address on the date inquired. A 60 mph gust occurred on May 14, 2015; i.e. 2 days after the reported date of loss.

Benchmark Weather History near location since 1 January 2009

Date	At Property Address		Within 1 Mile		Within 5 Miles		
	Est. Wind Gust Speed (mph)	Est. Duration (hrs) ≥ 50 mph	Est. Wind Gust Speed (mph)	Est. Duration (hrs) ≥ 50 mph	Est. Wind Gust Speed (mph)	Est. Duration (hrs) ≥ 50 mph	
8th Prior Wind Event	4-Jul-14	40	0	40	0	40	0
7th Prior Wind Event	17-Jul-14	40	0	40	0	40	0
6th Prior Wind Event	11-Aug-14	45	0	45	0	45	0
5th Prior Wind Event	18-Aug-14	40	0	40	0	45	0
4th Prior Wind Event	7-Sep-14	40	0	40	0	40	0
3rd Prior Wind Event	12-Oct-14	40	0	40	0	40	0
2nd Prior Wind Event	13-Oct-14	55	< 1	55	< 1	60	< 1
1st Prior Wind Event	16-Apr-15	40	0	40	0	40	0
Date of Loss	12-May-15	< 35	0	< 35	0	< 35	0

<https://www.xactware.com/store/PRODUCTS/Benchmark-Reports/1-280.do>





Local forecast by "City, St" or ZIP code

[Location Help](#)

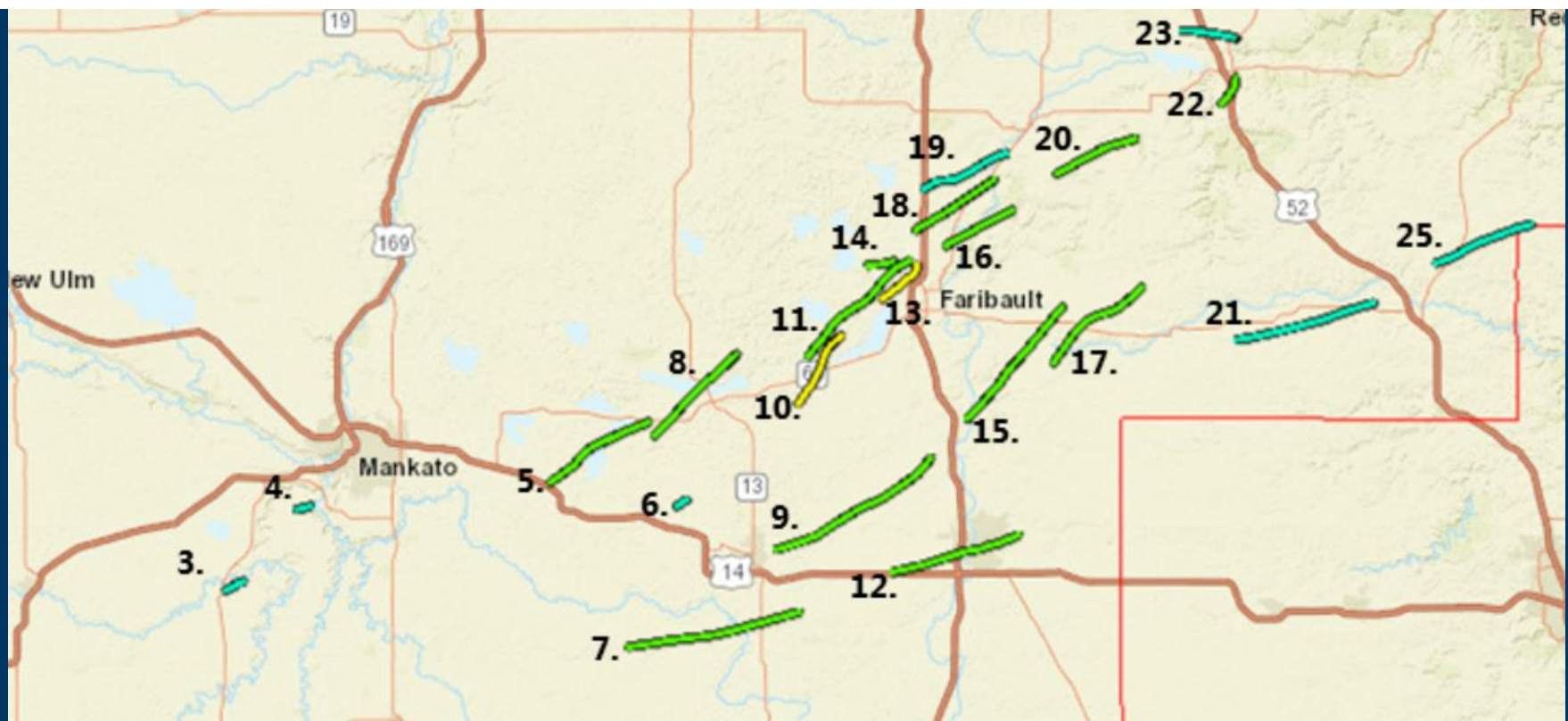
News Headlines

- [Historic, Unprecedented Storm of December 15-16, 2021 -- Updated Dec 28 --](#)
- [Latest Snowfall Reports](#)

September 20, 2018 Tornado Outbreak and Widespread Damaging Wind (updated 11/15)

Twin Cities, MN
Weather Forecast Office

[Weather.gov](#) > [Twin Cities, MN](#) > September 20, 2018 Tornado Outbreak and Widespread Damaging Wind (updated 11/15)



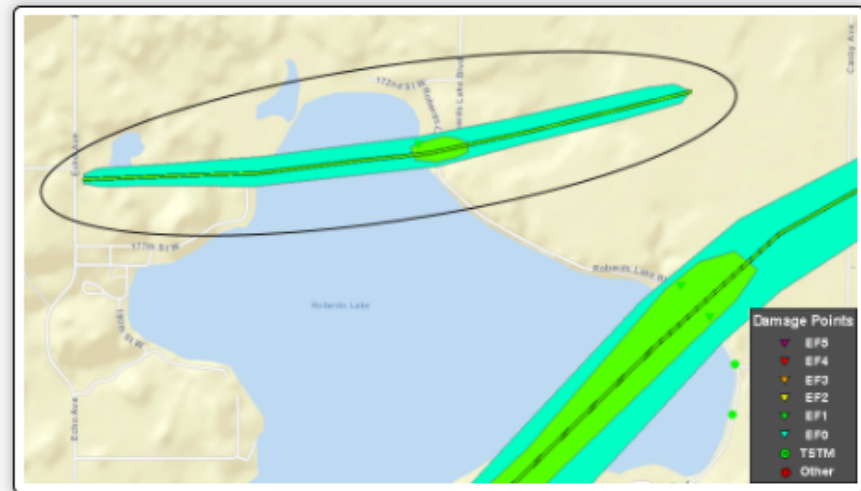
Tornado - Roberds Lake, Minnesota
(north side)
 Rice County

Date	September 20, 2018
Time (Local)	640 - 642 PM CDT
EF Rating	EF1
Est. Peak Winds	95 mph
Path Length	1.6 miles
Max Width	150 yards
Injuries/Deaths	None

Summary:

A NWS storm survey and drone footage showed that an EF1 tornado tracked 1.6 miles across the north side of Roberds Lake. Most of the damage was associated with large trees being uprooted or snapped, and the loss of some outbuildings.

Track Map



75
↓

115
↓

250
↓

EF0
Weak
 65-85 mph

EF1
Moderate
 86-110 mph

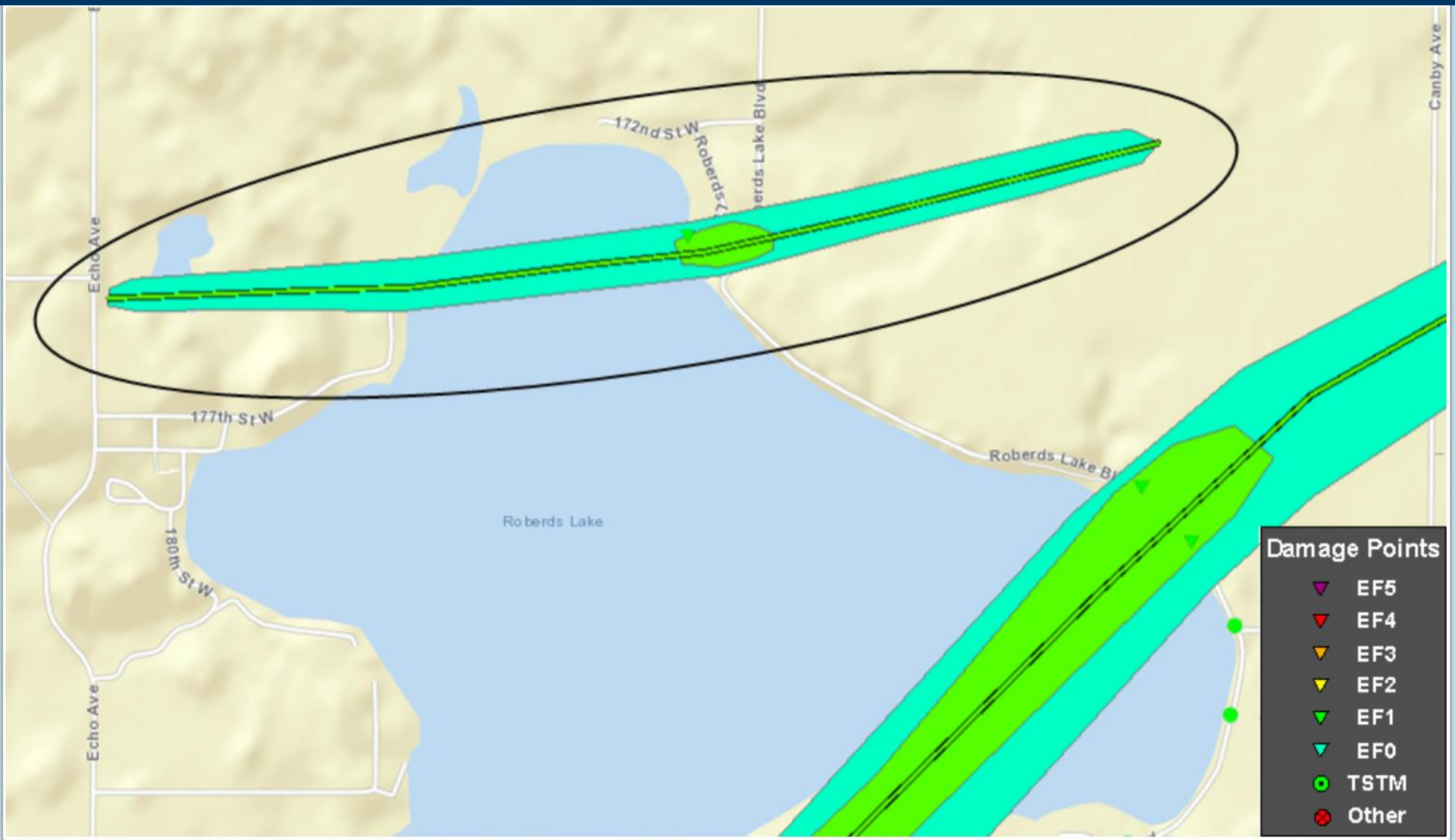
EF2
Significant
 111-135 mph

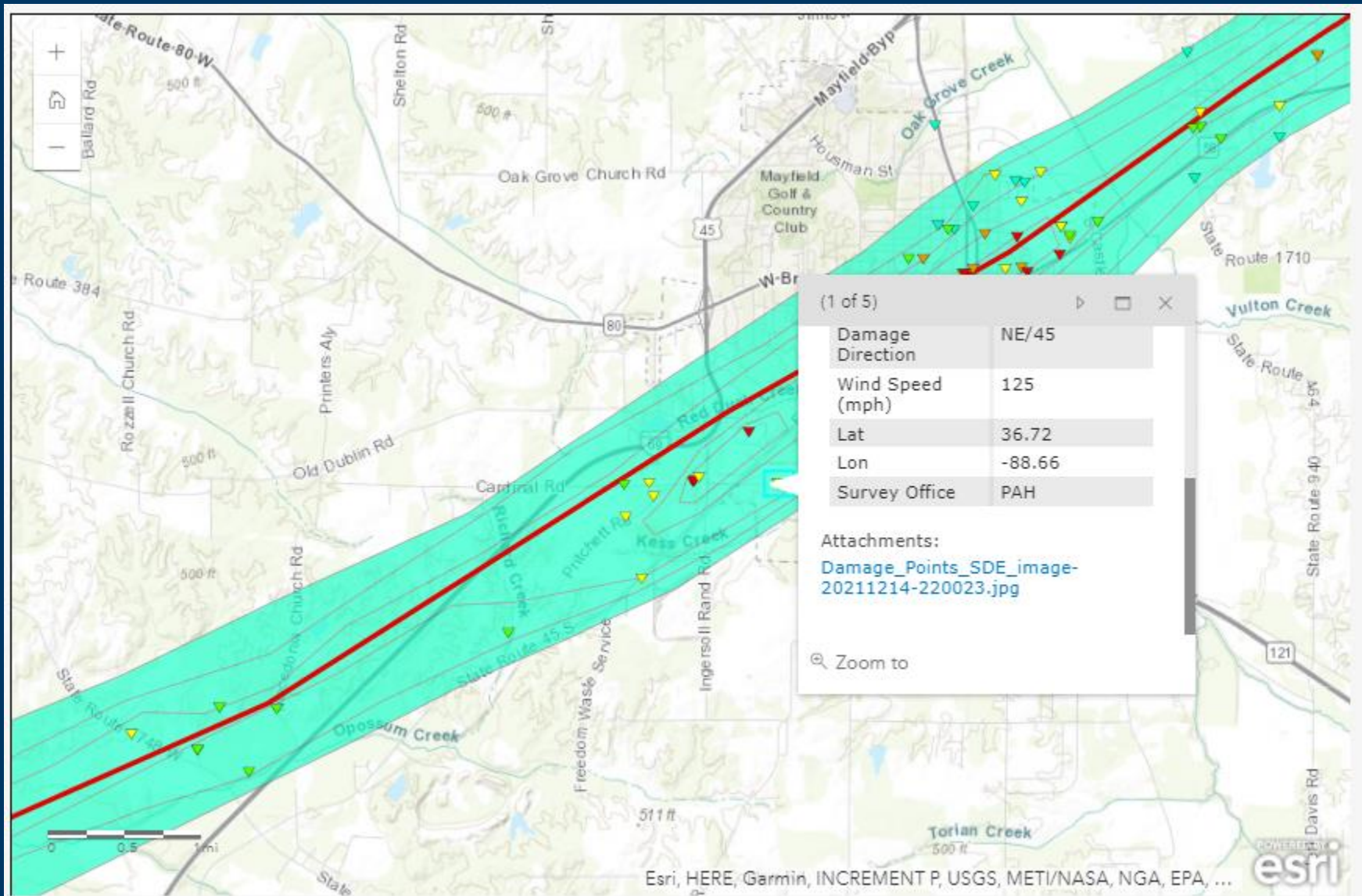
EF3
Severe
 136-165 mph

EF4
Extreme
 166-200 mph

EF5
Catastrophic
 200+ mph







<https://www.weather.gov/pah/December-10th-11th-2021-Tornado>



EF2

Storm Date	12/10/2021, 9:26 PM
Survey Date	12/14/2021, 3:59 PM
Damage Indicator	Electrical Transmission Lines (ETL)
Degree of Damage	Wood poles leaning
Damage Direction	NE/45
Wind Speed (mph)	125
Lat	36.72
Lon	-88.66
Survey Office	PAH

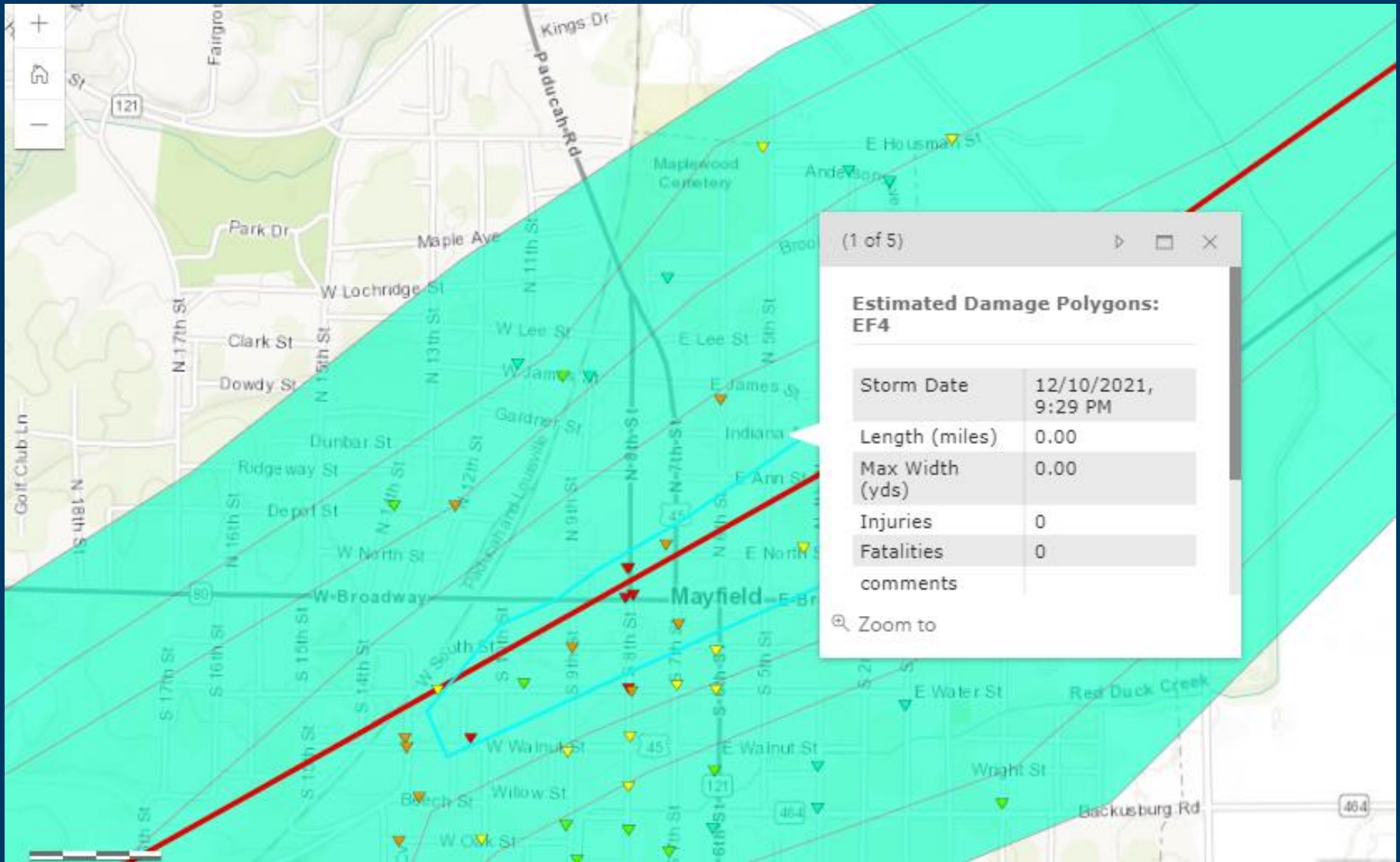
Attachments:

[Damage_Points_SDE_image-20211214-220023.jpg](#)



Storm Date	12/10/2021, 9:30 PM
Survey Date	12/13/2021, 10:28 AM
Damage Indicator	One- or Two-Family Residences (FR12)
Degree of Damage	Exterior walls collapsed
Damage Direction	N/A
Wind Speed (mph)	132
Lat	36.76
Lon	-88.61
Survey Office	PAH





(1 of 5) [Navigation icons]

**Estimated Damage Polygons:
EF4**

Storm Date	12/10/2021, 9:29 PM
Length (miles)	0.00
Max Width (yds)	0.00
Injuries	0
Fatalities	0
comments	

🔍 Zoom to





EFO

Storm Date	12/10/2021, 9:29 PM
Survey Date	12/13/2021, 9:45 AM
Damage Indicator	Trees: Hardwood (TH)
Degree of Damage	Trees uprooted
Damage Direction	N/A
Wind Speed (mph)	85
Lat	36.75
Lon	-88.63
Survey Office	PAH

