May 20, 2013
Newcastle-Moore Tornado

NWS Forecast Office Norman
Medium Range Graphicasts

**Monday Afternoon–Eve**
- Most Likely Locations For Storms
  - Damaging Wind
  - Large Hail
  - Tornadoes
- Most likely timing: Developing during the late afternoon and early evening, perhaps continuing during the late night hours.
  * Tornado Specifics still unclear

**Mon 5/16**

**Monday Afternoon–Evening**
- Most Likely Locations For Severe Storms
  - Tornado Specifics Still Unclear
- Most Likely Timing:
  - Developing during the late afternoon and early evening perhaps continuing during the late night hours
- Main Concerns:
  - Damaging Wind
  - Very Large Hail
  - Tornadoes

**Fri 5/17**

**Monday Afternoon–Eve**
- 70 mph wind gusts
- Baseball sized hail
- Tornadoes

**Sat 5/18**
# Medium Range Forecasts

## Next Seven Days

<table>
<thead>
<tr>
<th>Day</th>
<th>Weather</th>
<th>Lows</th>
<th>Highs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri</td>
<td>Sun</td>
<td>62-61</td>
<td>85</td>
</tr>
<tr>
<td>Sat</td>
<td>20-30%</td>
<td>66-67</td>
<td>84</td>
</tr>
<tr>
<td>Sun</td>
<td>20-50%</td>
<td>68</td>
<td>88</td>
</tr>
<tr>
<td>Mon</td>
<td>20-70%</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>Tue</td>
<td>20-40%</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>Wed</td>
<td>20%</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>Thu</td>
<td>20%</td>
<td>69</td>
<td>92</td>
</tr>
</tbody>
</table>

**Significant Severe Storms Possible**

- Fri, Sat, Sun
- Mon, Tue, Wed, Thu

**Severe Storms Possible**

- Fri, Sat, Sun, Mon, Tue, Wed, Thu

**Weather Hazards**

- Low Elevated
- High Impact Severe Impact

*For our counties in: Oklahoma & North Texas*
Medium Range Forecasts

Next Seven Days

- **Sat**: 20-30%, Patchy Morning Fog, Severe Storms Possible
- **Sun**: 20-70%
- **Mon**: 20-70%
- **Tue**: 20-50%
- **Wed**: 20%
- **Thu**: 20-30%
- **Fri**: 20%

**Low**
- **Elevated**

**High Impact**
- **Severe Impact**

*Norman, OK Forecast Office For Our Counties in: Oklahoma & North Texas*

*Fri 5/17*
<table>
<thead>
<tr>
<th>Wed 5/15 at 5:00am</th>
<th>Thu 5/16 at 5:00am</th>
</tr>
</thead>
<tbody>
<tr>
<td>.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY...</td>
<td>.DAYS TWO THROUGH SEVEN...FRIDAY THROUGH WEDNESDAY...</td>
</tr>
<tr>
<td>THUNDERSTORM OUTLOOK...</td>
<td>THUNDERSTORM OUTLOOK...</td>
</tr>
<tr>
<td>THUNDERSTORMS THAT DEVELOP WEDNESDAY EVENING MAY CONTINUE ACROSS SOUTH-CENTRAL AND SOUTHEAST OKLAHOMA</td>
<td>THUNDERSTORMS CHANCES WILL RETURN SATURDAY...MAINLY OVER WESTERN OKLAHOMA NEAR A DRYLINE. IF STORMS</td>
</tr>
</tbody>
</table>
# Hazardous Weather Outlooks

<table>
<thead>
<tr>
<th>Mon 5/20 at 5:00am</th>
<th>Mon 5/20 at 10:00am</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THUNDERSTORM OUTLOOK...</strong>&lt;br&gt;There is a moderate risk of severe thunderstorms through tonight across portions of Oklahoma and Western North Texas.</td>
<td><strong>THUNDERSTORM OUTLOOK...</strong>&lt;br&gt;There is a moderate risk of severe thunderstorms through tonight across portions of Oklahoma and Western North Texas. A few tornadoes are expected.</td>
</tr>
<tr>
<td><strong>LOCATION...</strong>&lt;br&gt;The moderate risk area is southeast of a line from Wichita Falls Texas...to Lawton Oklahoma...to El Reno...to Guthrie...to Stillwater.</td>
<td><strong>TIMING...</strong>&lt;br&gt;Although severe thunderstorms will be possible from 1 PM through midnight...the peak hours for severe weather...including tornadoes...will be between 3 PM and 8 PM this afternoon and evening.</td>
</tr>
<tr>
<td><strong>TIMING...</strong>&lt;br&gt;The most likely time for severe thunderstorms will be from 1 PM through midnight.</td>
<td><strong>IMPACTS...</strong>&lt;br&gt;Tornadoes...potentially strong with long tracks...along with baseball sized hail and damaging winds are likely with the strongest storms within the moderate risk area.</td>
</tr>
<tr>
<td><strong>IMPACTS...</strong>&lt;br&gt;Baseball sized hail...damaging winds...and a few tornadoes are likely with the strongest storms within the moderate risk area.</td>
<td></td>
</tr>
</tbody>
</table>
Short Range Graphicasts

**Monday Afternoon–Evening**
- **Most Likely Locations For Tornadoes**
- **Most Likely Locations For Severe Storms**

**Main Concerns:**
- 70 mph wind gusts
- Baseball sized hail
- Tornadoes

**Most Likely Timing:** Developing during the late afternoon and early evening and continuing into the night.

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**This Afternoon and Evening**
- **Most Likely Locations For Tornadoes**
- **Most Likely Locations For Severe Storms**

**Main Concerns:**
- 70 mph wind gusts
- Baseball sized hail
- Tornadoes

**Most Likely Timing:** Developing during the mid-afternoon and early evening, and continuing into the night.

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**This Afternoon and Evening**
- **Most Likely Locations For Tornadoes**
- **Most Likely Locations For Severe Storms**

**Main Concerns:**
- 70 mph wind gusts
- Baseball sized hail
- Tornadoes

**Most Likely Timing:** Developing during the early to mid-afternoon, and continuing into the night.

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- **Sun 5am**
- **Mon 3am**
- **Mon 9am**
NWS/SPC Coordination

NWS Norman’s Scott Curl coordinates the issuance of Tornado Watch 191 with the Storm Prediction Center
Tornado Watch

WATCH COUNTY NOTIFICATION FOR WATCH 191
NATIONAL WEATHER SERVICE NORMAN OK
110 PM CDT MON MAY 20 2013

THE NATIONAL WEATHER SERVICE HAS ISSUED TORNADO WATCH 191 IN EFFECT UNTIL 10 PM CDT THIS EVENING FOR THE FOLLOWING AREAS

IN OKLAHOMA THIS WATCH INCLUDES 30 COUNTIES

IN CENTRAL OKLAHOMA

CANADIAN  CLEVELAND  GRADY
KINGFISHER  LINCOLN  LOGAN
MCCLAIN  OKLAHOMA  PAYNE
POTTAWATOMIE
THE NATIONAL WEATHER SERVICE IN NORMAN HAS ISSUED A

* SEVERE THUNDERSTORM WARNING FOR...
  SOUTHEASTERN CANADIAN COUNTY IN CENTRAL OKLAHOMA...
  NORTHERN CLEVELAND COUNTY IN CENTRAL OKLAHOMA...
  NORTHEASTERN GRADY COUNTY IN CENTRAL OKLAHOMA...
  NORTHWESTERN MCCLAIN COUNTY IN CENTRAL OKLAHOMA...
  WESTERN OKLAHOMA COUNTY IN CENTRAL OKLAHOMA...

* UNTIL 300 PM CDT

* AT 208 PM CDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM LOCATED NEAR BRIDGE CREEK...MOVING NORTHEAST AT 40 MPH.

* LOCATIONS IMPACTED INCLUDE...
  OKLAHOMA CITY...MIDWEST CITY...MOORE...DEL CITY...MUSTANG...NEWCASTLE...TUTTLE...STANLEY DRAPER LAKE...BRIDGE CREEK...TINKER AIR FORCE BASE...FOREST PARK...VALLEY BROOK AND LAKE ALUMA.
Tornado Warning

NATIONAL WEATHER SERVICE NORMAN OK
240 PM CDT MON MAY 20 2013

THE NATIONAL WEATHER SERVICE IN NORMAN HAS ISSUED A

* TORNADO WARNING FOR...
NORTHWESTERN MCCLAIN COUNTY IN CENTRAL OKLAHOMA...
SOUTHERN OKLAHOMA COUNTY IN CENTRAL OKLAHOMA...
NORTHEASTERN GRADY COUNTY IN CENTRAL OKLAHOMA...
NORTHERN CLEVELAND COUNTY IN CENTRAL OKLAHOMA...

* UNTIL 315 PM CDT

* AT 238 PM CDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING A TORNADO. THIS DANGEROUS STORM WAS LOCATED NEAR NEWCASTLE...AND MOVING EAST AT 20 MPH.

IN ADDITION TO A TORNADO...LARGE DAMAGING HAIL UP TO GOLF BALL SIZE IS EXPECTED WITH THIS STORM.

* LOCATIONS IMPACTED INCLUDE...
NORMAN...MOORE...NEWCASTLE...BRIDGE CREEK AND VALLEY BROOK.
THE NATIONAL WEATHER SERVICE IN NORMAN HAS ISSUED A

* TORNADO WARNING FOR...
  NORTHWESTERN MCCLAIN COUNTY IN CENTRAL OKLAHOMA...
  SOUTHERN OKLAHOMA COUNTY IN CENTRAL OKLAHOMA...
  NORTHERN CLEVELAND COUNTY IN CENTRAL OKLAHOMA...

* UNTIL 345 PM CDT

* AT 259 PM CDT...NATIONAL WEATHER SERVICE METEOROLOGISTS
  AND STORM SPOTTERS WERE TRACKING A LARGE AND EXTREMELY
  DANGEROUS TORNADO NEAR NEWCASTLE. DOPPLER RADAR
  SHOWED THIS TORNADO MOVING NORTHEAST AT 20 MPH.

THIS IS A TORNADO EMERGENCY FOR MOORE AND SOUTH
OKLAHOMA CITY.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

THIS IS AN EXTREMELY DANGEROUS AND LIFE THREATENING
SITUATION. IF YOU CANNOT GET UNDERGROUND GO TO A STORM
SHELTER OR AN INTERIOR ROOM OF A STURDY BUILDING NOW.
Social Media: During Event

Monday 12pm-2pm

NWS Norman @NWSNorman
A tornado watch will be issued soon for much of Oklahoma. Stay alert! #okwx
Expand

NWS Norman @NWSNorman
Just launched a weather balloon. Cap is still there, but not strong and very breakable. Strong shear in place. #okwx
Expand

NWS Norman @NWSNorman
230pm - people in south OKC, Moore and north Norman need to be pay VERY close attention to the storm near Newcastle!! #okwx
Expand

NWS Norman @NWSNorman
222pm - things are getting very busy! Every storm that forms goes severe quickly. Please stay alert and be ready to act quickly! #okwx
Expand

NWS Norman @NWSNorman
211pm - severe thunderstorm warning for OKC metro area. Severe storm near Bridge Creek moving NE 40 mph. #okwx
Expand

NWS Norman @NWSNorman
208pm - storms developing near Blanchard and Tuttle, moving NE at 30 mph. Stay alert Norman, Moore, and S OKC. Not severe yet. #okwx
Expand

NWS Norman @NWSNorman
156pm - dry line visible on radar from SW of Minco to Elgin to Walters. Cold front from Minco to Yukon to Perkins. Areas S and E stay alert
Expand
Social Media: During Event

NWS Norman @NWSNorman
One warning forecaster focusing on big supercell west of OKC. #okwx pic.twitter.com/MVbwWhvgI

NWS Norman @NWSNorman
DO NOT take cover under highway overpasses!!! You will prevent people from getting to shelter. Get OFF THE ROAD and find a store, restaurant

NWS Norman @NWSNorman
245pm - you DO NOT want to be in your car in a tornado! Stay where you are. Get in, get down and cover up. Tornado may affect Moore/S OKC

NWS Norman @NWSNorman
240pm - TORNADO WARNING for OKC metro! Developing tornado near Newcastle moving E 20 MPH. Take shelter!! #okwx

NWS Norman @NWSNorman
239pm - storm west of Newcastle is intensifying and showing some rotation. Slay alert! No tornado warning yet. #okwx

Monday 2pm-2:50pm
Social Media: During Event

**Monday 2:55pm-3:25pm**

- **NWS Norman @NWSNorman**
  303pm - This is as serious as it gets for SW OKC and Moore. Please seek shelter now! #okwx
  Expand

- **NWS Norman @NWSNorman**
  302pm - LARGE VIOLENT TORNADO moving toward Moore and SW OKC. Take cover right NOW!!! Do not wait!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  301pm - TORNADO EMERGENCY OKC METRO!!
  Expand

- **NWS Norman @NWSNorman**
  Large dangerous tornado at 3pm!!! [pic.twitter.com/2hUzM0BV7k](https://twitter.com/NWSNorman/status/1335555930612088833)
  [View photo](https://twitter.com/NWSNorman/status/1335555930612088833)

- **NWS Norman @NWSNorman**
  Tornado north side of Newcastle at 256pm!
  [pic.twitter.com/yyryCp4WUW1](https://twitter.com/NWSNorman/status/1335556903334144257)
  [View photo](https://twitter.com/NWSNorman/status/1335556903334144257)

- **NWS Norman @NWSNorman**
  255pm - TORNADO! ON the north side of Newcastle moving east!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  325pm - tornado crossed I-35 in south Moore and is now moving along and south of 4th street. Take cover!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  322pm - the tornado is so large you may not realize it's a tornado. If you are in Moore, go to shelter NOW!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  TORNADO EMERGENCY for the City of Moore. Get as far inside a sturdy building as you can. Cover up! Do not wait!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  319pm - TORNADO Approaching area near Warren Theater in Moore! Please take shelter. This is as bad as it gets. #okwx
  Expand

- **NWS Norman @NWSNorman**
  317pm - Large tornado east of Bray, Stephens County. Take Cover RIGHT NOW!!! #okwx
  Expand

- **NWS Norman @NWSNorman**
  Large deadly tornado moving into Moore near 134th and Western.
  [pic.twitter.com/YA2pzEegqG](https://twitter.com/NWSNorman/status/1335556903334144257)
  [View photo](https://twitter.com/NWSNorman/status/1335556903334144257)
Social Media: During Event

NWS Norman @NWSNorman
340pm - Tornado could develop again at any time near Lake Stanley Draper! We are NOT in the clear yet! Stay alert! #okwx

NWS Norman @NWSNorman
336pm - tornado has roped out west of Lake Stanley Draper. #okwx

NWS Norman @NWSNorman
334pm - tornado moving toward lake Stanley Draper and will come VERY close to the KTLX radar site. #okwx

NWS Norman @NWSNorman
332pm - SE OKC is in immediate danger! Take cover. Large violent tornado moving your way. Do not wait to see the tornado! #okwx

NWS Norman @NWSNorman
TORNADO EMERGENCY for Moore. 328pm
pic.twitter.com/OiS2qlUcmc

Monday 3:28pm-3:40pm
Social Media: During Event

314pm - LARGE VIOLENT TORNADO near SW 134th and Western. Take cover in Moore NOW!!!

331pm - TORNADO EMERGENCY for Moore. Tornado moving north of 4th street between Sunnylane and Sooner Road. Deadly serious situation. Save your life and seek shelter now.
Social Media: Event Aftermath

NWS Norman @NWSNorman
Newcastle-Moore OKC Tornado was on the ground approx. 40 minutes. Tornado warning was in effect for 16 minutes before tornado developed.
Expand

NWS Norman @NWSNorman
PRELIMINARY tornado damage track for the Newcastle-Moore-South OKC tornado. Based on radar and damage reports. #okwx
pic.twitter.com/MT0auFhmnY
View photo

NWS Norman @NWSNorman
Comparison between May 3 1999 and PRELIM May 20, 2013 tornado paths - #okwx pic.twitter.com/oDsgb4uZo4
View photo

NWS Norman @NWSNorman
458pm - Preliminary Rating of Newcastle-Moore Tornado at least EF-4 #okwx
Expand

NWS Norman @NWSNorman
FB page for Moore Tornado Recovery Information: facebook.com/MooreOKTornado...
Expand

NWS Norman @NWSNorman
We have an end point for the Newcastle/Moore tornado. 4.8 miles E of Moore at approx 336 pm CDT. #okwx #txwx
Expand

NWS Norman @NWSNorman
Survey teams are assessing damage. Reports/ratings will take some time as rounds of lightning/rain impact the damaged area. #okwx
Expand

NWS Norman @NWSNorman
NWS Norman is in direct contact with incident commanders and responders conducting search and rescue operations in Moore.#okwx
Expand

US National Weather Service Norman Oklahoma
647-pm Severe Thunderstorm Warning issued for the OKC Metro, this will not impact the First Responders/Recovery in Moore at the moment
Like · Comment · Share
Comparison of the Preliminary May 20, 2013 Tornado Track with the May 3, 1999 and May 8, 2003 Tornado Tracks