

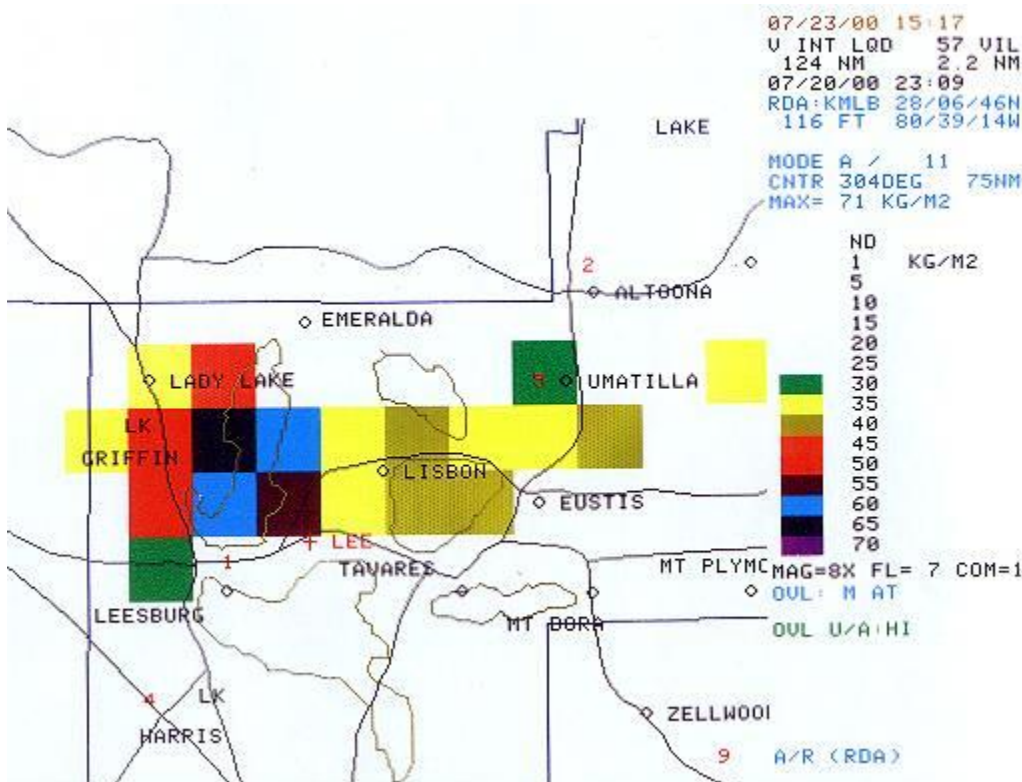
## Leesburg wind storm 7/20/00

On the evening of July 20th, 2000, severe thunderstorms moved across Lake County three times. The first storms moved out of Sumter County across the Mascotte area to near Mount Dora producing minor wind damage. The second group of storms developed over sparsely populated areas of northern Lake County between Cassia and Paisley and moved into western Volusia County causing wind damage in the Deland area. The third, and most intense round of severe thunderstorms, developed rapidly north of Leesburg, moved south and produced wind damage in the Leesburg area. The thunderstorms were unusually strong for July due to a combination of abundant low-level moisture, unseasonable cold, dry, air above 10,000 feet, and record-breaking temperatures. This resulted in a very unstable atmosphere conducive to severe thunderstorms which was noted in Hazardous Weather Outlooks issued by the National Weather Service in Melbourne at [6 AM](#) and [1137 AM](#).

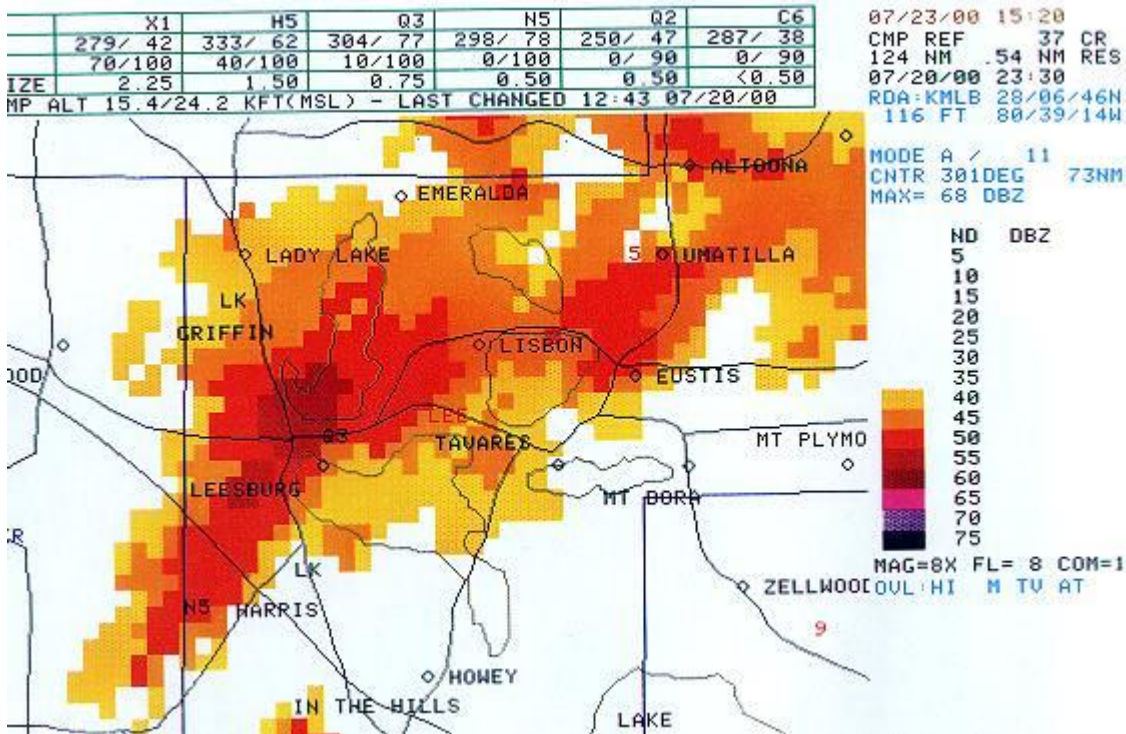
By late afternoon on July 20th severe thunderstorms were developing rapidly over Lake County. The National Weather Service uses a combination of radar data and spotter reports to predict and track severe weather. The Lake County Amateur Radio Emergency Service (ARES) SKYWARN Spotters were very effective in passing real-time information to the National Weather Service.

For a chronology of the products issued by the NWS in Melbourne, click [here](#).

The National Weather Service conducted a ground survey of the damage east of Leesburg and determined the damage was caused by a classic, but relatively large "Macroburst" which is defined as a downdraft from a thunderstorm greater than 2 1/2 miles wide. The Leesburg "macroburst" was unusually broad and extended for nearly 5 miles along Highway 441 east of Leesburg and produced mostly minor wind damage and general wind speeds were estimated at 50 to 60 mph. This macroburst marked the downrush of rain-cooled winds associated the intense severe thunderstorm. Embedded within the larger macroburst were a number of small, but intense "microbursts", with wind speeds approaching 100 mph that caused the most significant damage at and near the Leesburg Airport and at several trailer parks east of the airport. A report of a 125 mph wind was reported from the Lake County Emergency Management Office at 745 pm.



A Vertically Integrated Liquid (VIL) image from the WFO Melbourne WSR-88D radar at 7:09 pm EDT. Note that the storm had developed vertically well before the bulk of severe weather occurred. A VIL of 65 to 70 kg/m2 was associated with this storm between Lady Lake and the Leesburg Airport. This image and others gave the MLB forecasters notice of the severity of the storm and warnings were issued well in advance of the severe winds that impacted the area.



A composite reflectivity image from the WFO Melbourne WSR-88D radar at 7:30 pm.



Conceptual diagram of macroburst over damage area, based on survey and interpretation of radar imagery.



Leesburg damage map area with photo locations indicated.



Location 1. Pool enclosure destroyed.



**Location 2. Large oaks sheared.**



**Location 3. Carport crushed by tree.**



**Location 4. Plane flipped.**



**Location 5. 2 planes twisted together.**



**Location 6. Building fascia removed.**

**Chronology of NWS product issuances for Lake County:**

<b>Time Issued EDT</b>	<b>Product</b>
<b>5:41 PM</b>	<b>Severe Thunderstorm Warning - Lake County Valid until 6:30 PM.</b>
<b>6:13 PM</b>	<b>Severe Weather Statement - Lake County</b>
<b>6:30 PM</b>	<b>Severe Thunderstorm Warning - Lake County Valid until 7:00 PM.</b>
<b>6:58 PM</b>	<b>Severe Weather Statement - Lake/Volusia Counties.</b>
<b>7:08 PM</b>	<b>Severe Thunderstorm Warning - Lake County Valid until 8:15 PM.</b>
<b>7:30 PM</b>	<b>Tornado Warning - Lake County Valid until 8:00 PM.</b>
<b>9:54 PM</b>	<b>Storm Report (see below)</b>

**EAST CENTRAL FLORIDA HAZARDOUS WEATHER OUTLOOK**

NATIONAL WEATHER SERVICE, MELBOURNE, FL  
600 AM EDT THU JUL 20, 2000

... SCATTERED STRONG LIGHTNING STORMS ARE POSSIBLE THIS AFTERNOON...

A WEAKENING FRONTAL BOUNDARY WILL MOVE SOUTHEAST TODAY INTO NORTH CENTRAL FLORIDA BY THIS AFTERNOON. THIS BOUNDARY WILL INTERACT WITH THE EAST AND WEST COAST SEA BREEZES TO PRODUCE SCATTERED STRONG LIGHTNING STORMS BY MID TO LATE AFTERNOON.



THE STORMS WILL FORM OVER THE COASTAL COUNTIES BY EARLY AFTERNOON ALONG THE EAST COAST SEA BREEZE MAINLY INLAND AND WEST OF INTERSTATE 95. THE STORMS WILL BECOME MORE NUMEROUS BY LATE AFTERNOON AND WILL MOVE SLOWLY TO THE SOUTH AND EAST DUE TO LIGHT WINDS ALOFT. THE PRIMARY THREATS WILL BE FREQUENT TO EXCESSIVE DEADLY CLOUD TO GROUND LIGHTNING...STRONG GUSTY WINDS BETWEEN 40 TO 50 MPH...VERY HEAVY RAINFALL AND SMALL HAIL. A COUPLE OF THE STORMS THAT WILL DEVELOP THIS AFTERNOON MAY BECOME SEVERE WITH LOCALIZED DAMAGING WINDS AND HAIL THE MAIN THREATS.

IF YOU ARE OUTDOORS WHEN A LIGHTNING STORM APPROACHES...MOVE TO A SUBSTANTIAL BUILDING OR AN ENCLOSED AUTOMOBILE. REMEMBER THAT TREES AND OPEN SHELTERS FOUND ON BEACHES OR GOLF COURSES OFFER NO PROTECTION FROM LIGHTNING.

FOR MARINE INTERESTS...ISOLATED STORMS WILL DEVELOP CLOSE TO THE NEARSHORE AND INTRACOASTAL AREAS THIS AFTERNOON...WITH OTHER SCATTERED STRONG LIGHTNING STORMS POSSIBLE LATE THIS AFTERNOON AND INTO EARLY EVENING AS THE STORMS MOVE SOUTHEAST TOWARD THE COAST. MARINERS SHOULD BE ON THE LOOKOUT FOR DEVELOPING STORMS THAT WILL APPROACH FROM THE WEST. WIND GUSTS OVER 34 KNOTS AND FREQUENT CLOUD TO WATER LIGHTNING WILL BE POSSIBLE WITH THE STORMS.

SELF ACTIVATION OF SKYWARN SPOTTER NETWORKS IS REQUESTED IF ANY WEATHER WARNINGS ARE ISSUED.

THE GRAPHICAL VERSION OF THIS HAZARDOUS WEATHER OUTLOOK IS AVAILABLE AT: [HTTP://WWW.SRH.NOAA.GOV/MLB/HWOFILES/HWOMAIN.HTML](http://www.srh.noaa.gov/mlb/hwofiles/hwomain.html)

FLZ041-044 047-053-054-058-059-064-201900-

EAST CENTRAL FLORIDA HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE, MELBOURNE, FL  
1137 AM EDT THU JUL 20 2000

...WIDELY SCATTERED STRONG STORMS BY LATE AFTERNOON...  
...HEAT INDEX 105 TO 110...

A WEAK FRONTAL TROUGH WILL DROP SOUTH THROUGH GEORGIA THIS AFTERNOON. MOISTURE WILL INCREASE AHEAD OF THIS SYSTEM AND SHOULD LEAD TO A HIGHER COVERAGE OF THUNDERSTORMS. THE PRESENCE OF SOME DRIER AIR IN THE MID LEVELS MAY LEAD TO A FEW STRONG TO SEVERE STORMS ONCE AGAIN.

WIDELY SCATTERED STORMS ARE EXPECTED TO MOVE INTO THE INTERIOR SECTIONS BETWEEN LAKE KISSIMMEE AND LAKE OKEECHOBEE BY MID AFTERNOON. A FEW STORMS SHOULD ALSO DEVELOP NEAR THE COAST. INTERACTIONS OF BOUNDARIES BY LATE AFTERNOON SHOULD LEAD TO INCREASED COVERAGE AND INTENSITY OF THE STORMS. THUNDERSTORMS SHOULD ALSO BUILD NORTHWARD INTO METRO ORLANDO...LAKE AND VOLUSIA COUNTIES DURING THE LATE AFTERNOON AND EARLY EVENING.

THE PRIMARY THREAT WILL BE FREQUENT TO EXCESSIVE LIGHTNING. A COUPLE OF THE STORMS MAY BECOME SEVERE WITH LOCALIZED DAMAGING WINDS AND HAIL.

MOVE INSIDE AT THE FIRST SIGN OF THREATENING SKIES.

WITH TEMPERATURES REACHING THE MIDDLE 90S OVER MOST AREAS AND

HUMIDITY LEVELS ABOVE NORMAL...HEAT INDEX READINGS WILL APPROACH 110 DEGREES. THESE HOT AND HUMID CONDITIONS POSE A DANGER TO PEOPLE WITH OUTDOOR ACTIVITIES...ESPECIALLY THE ELDERLY.

SELF ACTIVATION OF SKYWARN SPOTTER NETWORKS IS REQUESTED IF ANY WEATHER WARNING S ARE ISSUED LATE THIS AFTERNOON OR DURING THE EARLY EVENING.

THE GRAPHICAL VERSION OF THIS HAZARDOUS WEATHER OUTLOOK IS AVAILABLE AT: [HTTP://WWW.SRH.NOAA.GOV/MLB/HWOFILES/HWOMAIN.HTML](http://www.srh.noaa.gov/mlb/hwofiles/hwomain.html)

**Here is an excerpted Local Storm Report issued by WFO MLB on the evening of 7/20/00**

ZCZC MIALSRMLB  
TTAA00 KMIA 210156

LSRMLB  
PRELIMINARY LOCAL STORM REPORT  
NATIONAL WEATHER SERVICE MELBOURNE, FL  
954 PM EDT THU JUL 20 2000

TIME(EDT) .....CITY LOCATION.....STATE ...EVENT/REMARKS...  
....COUNTY LOCATION....

0728 PM LEESBURG FL WIND DAMAGE  
07/20/00 LAKE LAW ENFORCEMENT REPORTED  
POSSIBLE TORNADO SIGHTED AT  
LAKE SQUARE MALL.

0740 PM TAVARES FL WIND DAMAGE  
07/20/00 LAKE TRAINED SPOTTER REPORTED  
DAMAGE TO CRUISE BOAT.

0742 PM LEESBURG FL WIND DAMAGE  
07/20/00 LAKE TRAINED SPOTTER REPORTED  
DAMAGE TO STORE.

0740 PM LEESBURG FL WIND DAMAGE  
07/20/00 LAKE TRAINED SPOTTER REPORTED  
TREES DOWN US 441 AT LAKE  
GRIFFIN HARBOR.

0725 PM LEESBURG FL WIND DAMAGE  
07/20/00 LAKE TREE DOWN ON MOBILE HOME.

0730 PM LEESBURG FL .75 INCH HAIL  
07/20/00 LAKE

0725 PM THE VILLAGES FL WIND DAMAGE  
07/20/00 LAKE TRAINED SPOTTER REPORTED  
TREES DOWN

---

06/30/03 JP/DJ