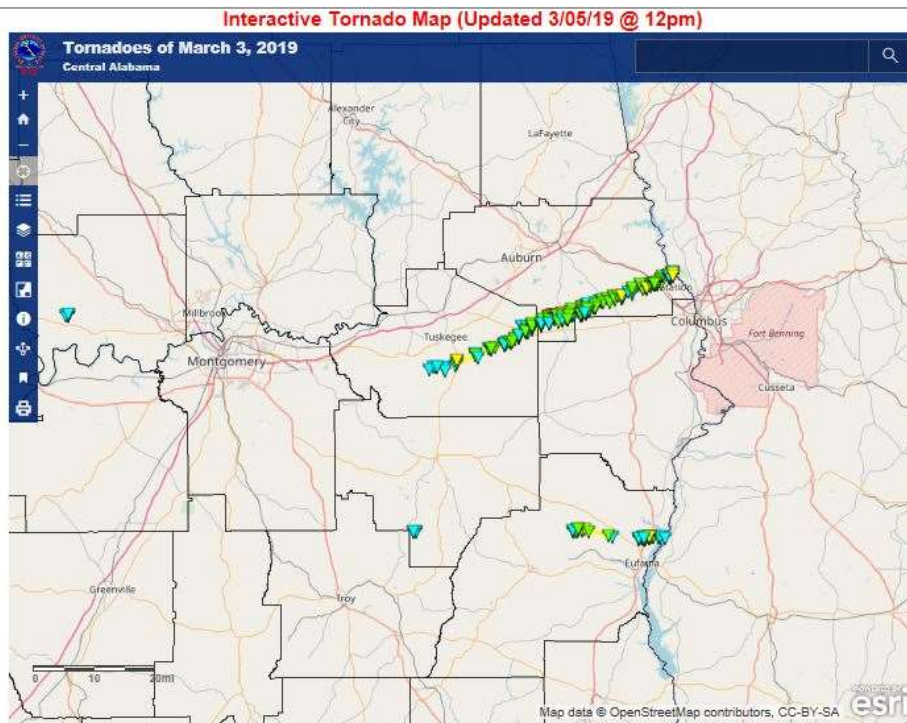


Tornado in East-Central Alabama on March 3, 2019

Turbulent weather began to move across the southeast. A low pressure system proceeded northeast from southeast Texas bringing unstable climatic conditions. The contrast of warmer weather from the southwest merging into a colder climate in Alabama caused atmospheric fury, especially for the central part of the state. This environmental situation was ideal for severe thunderstorms and tornadoes.

Sunday afternoon was a despairing time for Alabama. The unstable storm system travelled across the state bringing strong winds, precipitation, and tornadoes. This weather pattern moved rather quickly, but left destruction in its path. As a result, several tornadoes landed in Alabama. Two areas in the state, Bearegard/Smiths Station and Eufaula received the most noticeable damage. The worst of the storm, however, occurred in Lee County, AL.



Location/Clickable Detailed Summary Link	Damage Rating/Estimated Maximum Wind Speeds	Injuries/Fatalities	Damage Path Length/Width	Starting Point/Time	Ending Point/Time
County Road 33 Tornado (Autauga County)	EF-0 75 mph	None	0.62 miles 70 yards	2 ENE Mulberry 32.4710-86.7470 1:19 pm CST	2 ENE Mulberry 32.4762/-86.7385 1:19 pm CST
Bearegard/Smiths Station Tornado (Macon/Lee Counties)	EF-4 170 mph (EF-3 in WFO FFC, GA)	23 fatalities 90 Injuries	26.73 miles 1600 yards	3 NW Society Hill 32.4472-85.4818 2:00 pm CST	3 NE Smiths Station 32.5750/-85.0570 2:29 pm CST
Davisville/Corbett Crossroad Tornado (Macon/Lee Counties)	EF-2 115 mph	1 Injury	29.15 miles 1300 yards	3 ESE Liverpool 32.3455/-85.7356 2:27 pm CST	2 S Griffen Mill 32.4919/-85.2738 2:57 pm CST
County Road 8 Tornado (Bullock County)	EF-0 65 mph	None	0.42 miles 50 yards	4 S SW Inverness 31.9637/-85.7804 3:15 pm CST	4 S SW Inverness 31.9637/-85.7733 3:15 pm CST
County Road 79 Tornado (Barbour County)	EF-2 115 mph	None	6.68 miles 700 yards	3 S SW Batesville 31.9653/-85.3392 3:45 pm CST	1 SW Lugo 31.9509/-85.2283 3:55 pm CST
Weedon Field Tornado (Barbour County)	EF-2 130 mph (Cont'd into GA)	None	4.20 miles 600 yards	3 NW Old Town Creek Rec Area 31.9483/-85.1537 3:56 pm CST	3 NE Old Town Creek Rec Area 31.9485/-85.0833 4:03 pm CST

Macon and Lee County Tornadoes:

As the storm manifested in Macon County, tornadoes descended from this area and moved across Lee County. There were two tornadoes that landed in Lee County. The path of the first tornado was situated near Beaugard and Smiths Station. This tornado started around 2:00 p.m. and traversed on the ground from Beaugard moving eastward just north of Smiths Station. The tornado continued its path northeast into Georgia. The first tornado was an EF-4 with winds of 170 miles per hour (mph) and approximately 1 mile wide. It remained on the ground for approximately 70 miles from Alabama into Georgia. A second tornado descended in the same area at approximately 2:30 p.m. also starting in Macon County and travelling through Beaugard. This tornado was an EF-2 with winds of 115 mph. It eventually rescinded before reaching Smiths Station.

Both tornadoes caused significant damage. Some homes were demolished along the tornado path. Other buildings, structures, and trees were also destroyed. After the tornadoes passed through Alabama, approximately 11,000 residents were without power. The most concerning and unfortunate news was associated with the loss of lives. Hours after the storm, there were 23 fatalities in Alabama and 91 injuries with 18 individuals missing. Most of these victims were residents of Beaugard, AL. Of the fatalities, 3 were children. The people that lost their lives in the storm ranged from 6 to 90 years old. A few days later, the 18 missing individuals were accounted for thanks to the extensive search and rescue efforts of emergency crews. The number of fatalities from this tornado event in Alabama was more than twice the total number of deaths from tornadoes across the United States in 2018. Two corporations requesting to remain anonymous pledged to finance the funerals for the 23 victims. On Tuesday, March 5, 2019, President Trump granted Governor Ivey's request for a federal disaster declaration for the state of Alabama. President Donald Trump continued his assistance to the state by visiting Alabama on Friday, March 8, 2019 to assess the tornado-ravaged areas.

Timber Damage Assessment:

Besides obvious destruction to residential and commercial properties, there was significant forestland damage reported in these distressed areas. As a responsibility to assist with emergency responses following natural disasters, the Alabama Forestry Commission implemented a strategic plan to assess tornado-inflicted regions. The Alabama Forestry Commission conducted an aerial assessment of the two significantly-damaged areas - Beaugard/Smiths Station and Eufaula. More specifically, Barbour, Macon and Lee Counties were surveyed on Thursday, March 7, 2019. Agency pilots and employees conducted the survey using global positioning system (GPS) and geographic information system (GIS) technology. The Alabama Forestry Commission pilots implemented the flights. Using ArcGIS Collector, spotters delineated damaged areas by drawing polygons and recording the measurement in acres. For each polygon, the percentage of damaged forestland was also recorded. After mapping the polygons of damaged property, the data was synced and illustrated on the web-based map. The Alabama Forestry Commission GIS Specialist edited the data, categorized the stand type, summarized the number of acres, and created a final map of the storm-damaged areas.

Using GIS data from the aerial survey, the Alabama Forestry Commission, Forest Inventory and Analysis (FIA) Coordinator obtained volume estimates from current FIA data. The dollar value of the volume was obtained from the current TimberMart-South price reports. The FIA Coordinator produced the following information – timber volume and estimated value of damaged stands. The Forest Health Coordinator reviewed the information and incorporated it into the Storm Damage Assessment Report. In summary, 5,888 forested acres were damaged by tornadoes in Macon, Lee, and Barbour Counties, with 149,130 tons of timber destroyed at a value of \$3,369,071 million.

Macon County	Forestland (Acres)	Percent Forestland Damage	Volume Per Acre (tons)	Total Volume Damaged (tons)	Value Per Ton	Total Value Damage
Pine	392	44	53.36	9,204	\$17.63	\$162,261
Hardwood	432	44	59.28	11,267	\$27.00	\$304,214
Mixed (P/H)	370	44	60.22	9,804	\$22.32	\$218,774
Total	1,194	--	172.86	30,275	---	\$685,250

Lee County	Forestland (Acres)	Percent Forestland Damage	Volume Per Acre (tons)	Total Volume Damaged (tons)	Value Per Ton	Total Value Damage
Pine	1,446	44	53.36	33,950	\$17.63	\$598,545
Hardwood	1,595	44	59.28	41,600	\$27.00	\$1,123,199
Mixed (P/H)	1,366	44	60.22	36,195	\$22.32	\$807,690
Total	4,407	---	172.86	111,745	---	\$2,529,434

Barbour County	Forestland (Acres)	Percent Forestland Damage	Volume Per Acre (tons)	Total Volume Damaged (tons)	Value Per Ton	Total Value Damage
Pine	150	50	53.36	3,522	\$17.63	\$62,090
Hardwood	100	50	59.28	2,608	\$27.00	\$70,420
Mixed (P/H)	37	50	60.22	980	\$22.32	\$21,877
Total	287	---	172.85	7,110	---	\$154,387

Combined Counties	Forestland (Acres)	Percent Forestland Damage	Volume Per Acre (tons)	Total Volume Damaged (tons)	Value Per Ton	Total Value Damage
Total	5,888	---	---	149,130	---	\$3,369,071

TORNADO MARCH 3, 2019 LEE AND MACON COUNTIES, ALABAMA



Impacted Forested Acres: 16,911

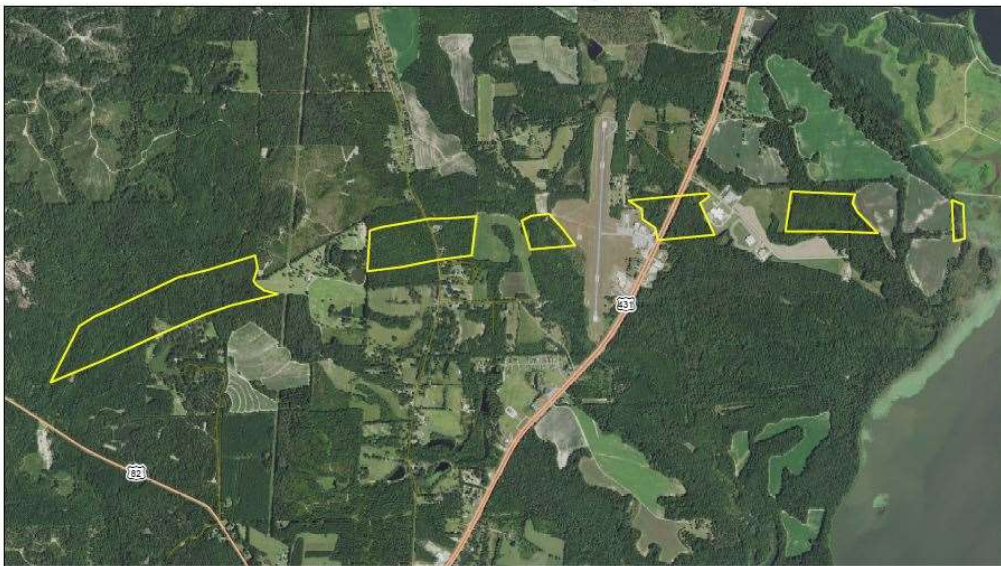
Date Prepared: 03/06/2019

Service layer credits: Esri, NWS and USDA

Legend

- Beauregard Smiths Station Tornado
- ICT Forestry

TORNADO MARCH 3, 2019 BARBOUR COUNTY, ALABAMA



Date Prepared: 03/06/2019

Service layer credits: Esri, NWS and USDA

Legend

- Eufaula Tornado

Landowner Information:

Many landowners with severe forest damage are concerned about the financial loss of destroyed timber, the supplemental cost of debris removal, and the additional expense for tree regeneration. Fallen and broken trees have obvious damage. The quality of such trees will decline resulting in a decrease in timber value. Even for standing timber with no apparent damage, the bending, twisting, and moving of these residual trees during the tornado may have caused structural damage. This type of damage will also decrease the quality, thus decreasing the value. Consequently, loggers that salvage trees and transport them to wood-using facilities will most likely pay a much lower price for tornado-damaged timber.

Additionally, forest landowners impacted by the tornado may also encounter higher costs for heavy site preparation. With the excessive amount of debris such as broken limbs, fallen trees, and even non-forest trash on the property, site preparation will be extensive, thus increasing the price. There is also a cost for artificial regeneration or replanting the site. The average cost for site preparation and replanting a stand is approximately \$425 per acre or \$2,502,400 for the 5,888 forested acres impacted by the tornado. The \$2,502,400 amount may be higher since additional work is needed to restore the stand. With the value of damaged forestland and the cost for site restoration, the total estimated loss to affected landowners is \$5,871,471.

Some landowners may decide to leave storm debris and injured trees on the property, especially if the damage was not severe. If a landowner chooses this management option, there are some conditions to consider. Down timber adds fuel to the ground that will ultimately increase the risk of wildfires. Injured trees are more stressed and vulnerable to opportunistic pests like bark beetles and wood borers. If landowners have further forest management questions and concerns, they can contact their local Alabama Forestry Commission office or go to the agency's website, www.forestry.alabama.gov/ for information.

Acknowledgements:

Several Alabama Forestry Commission (AFC) employees contributed to this report – the Assistant State Forester, the Division Directors, the Fire Operations Chief, the GIS Specialist, the FIA Coordinator, the pilots, the Southeast Regional Staff, the Media Team, and many others in the agency. Thank you for your diligence and cooperation.

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