



TIMBER IMPACT ASSESSMENT

Talbot County Tornado Damage, April 27, 2017

By: Keith E. Sanders and Chip Bates; Georgia Forestry Commission
 (ksanders@gfc.state.ga.us, cbates@gfc.state.ga.us)

BACKGROUND

The National Weather Service (NWS) determined an EF-2 tornado moved across Talbot County on the afternoon of April 27, 2017. The tornado touched down at approximately 1:15 PM EDT, near the Talbot/Muscogee County line. Figure 1, right, displays the paths of the tornado. This information was provided by the National Weather Service. The tornado initially touched down in wooded and residential areas near Box Spring, Georgia, causing EF-1 damage. Damage included uprooted trees and damage to several dwellings and a large barn. The tornado then briefly weakened, causing sparse damage to trees. At approximately 1:30 PM, the tornado strengthened to an EF-2, causing significant damage to forestland and structures in the Rock Church area north of Junction City, Georgia. The tornado reached a width of at least a quarter mile in the Rock Church area, blowing over and snapping off planted pines at their base. Multiple manufactured homes were damaged and a mid-sized barn was flattened. No injuries to residents or first responders was reported. The tornado spent approximately 32 minutes on the ground during its 21.5 mile path. (This information provided by the NWS.)

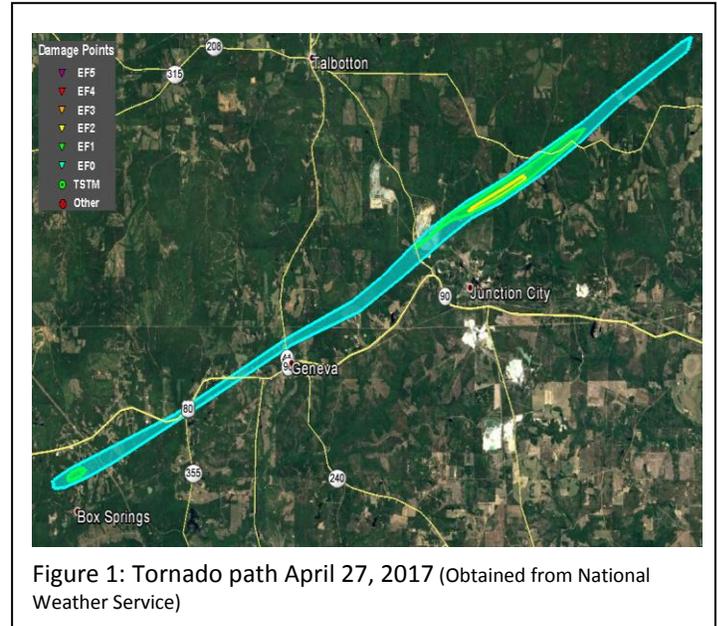


Figure 1: Tornado path April 27, 2017 (Obtained from National Weather Service)

The Peachtree City, Georgia site can be viewed at http://www.weather.gov/ffc/20170427_tornado.

Rating:	EF-2
Peak Wind:	120 MPH
Path Length:	21.5 miles
Path Width:	700 yards (0.4 miles)
Fatalities:	0
Injuries:	0
Start Date:	Apr. 27, 2017
Start Time:	1:15 PM EDT
Start Lat/Lon:	32.540892 / -84.673540
End Date:	Apr. 27, 2017
End Time:	1:47 PM EDT
End Lat/Lon:	32.682227 / -84.343417

OBSERVATIONS

Local Georgia Forestry Commission Forester Keith Sanders and Ranger Benjamin Brogdon surveyed the primary zones impacted by the tornado. The tornado touched down in the Box Springs community, with light to moderate damage to the mixed pine/hardwood forest. It continued to travel northeast through Geneva and north of Junction City. Overall, the timber impact assessment revealed light to moderate damage in rural forested areas, with the exception of one area close to the intersection of Highway 208 and Matthews Road. On Highway 208, a large tract of recently thinned planted loblolly pines were snapped off about five feet from the ground. The damage in this area has been categorized as catastrophic. (Figure 2 & 3)

Figure 2: Areal View Obtained from National Weather Service



Figure 3: Ground View



Tornado impacted areas predominantly had trees snapped, with some uprooted trees. In addition, hardwood timber was also destroyed. Most of the hardwood damage was primarily located within Streamside Management Zones (SMZs), drains or mixed pine/hardwood timber stands.

Storm Damage Intensity:

Minimal damage – scattered branches and limbs broken from trees, with little to no damage to the overall stand, and scattered trees bent less than 45 degrees. No salvage operation will be necessary and the stand should recover with no additional management requirements.

Light damage – only branches and limbs broken from the trees, with minor damage to the overall stand, and trees bent less than 45 degrees. No salvage operation will be necessary and the stand should recover with no additional management requirements, though long term yields will likely be impacted.

Moderate damage – branches and limbs broken from the trees, with damage to the overall stand. More than 25% of stems broken, wind-bent or uprooted, and a salvage operation should be considered to minimize losses and remove trees that likely will not survive.

Severe damage – more than 30% of stems broken, tops broken out across the stand, limbs stripped, trees uprooted, and/or trees bent more than 45 degrees. A salvage operation must be considered ASAP, with clear-cutting recommended. The stand is, from a management perspective, a total loss.

Catastrophic damage – more than 50% of stems broken, multiple trees blown down across the stand, tops broken out across the stand, limbs stripped, and trees bent more than 45 degrees. A salvage operation is necessary ASAP. The stand is considered a total loss.

EXTENT OF DAMAGE

The Georgia Forestry Commission evaluated damage in Talbot County along the 21.5 mile path of the tornado, and developed estimates of timber damage acreage. These estimates do not include areas outside the primary tornado paths or areas of minimum damage. The chart below displays the timber damage by timber type.

Timber Damage Acreage assessment					
Tornado Name	Pine ST (ac)	Pine Pulp (ac)	Pine – HW Mix (ac)	Mixed Hardwood (ac)	Total (ac)
EF-2 Talbot County 4/27/2017	59	162	504	73	798

Overall, there were approximately 8,000 rural woodland acres affected by the Talbot County tornado. In addition to the rural areas, many urban forest trees were destroyed or severely damaged. The urban landscape in areas such as the City of Box Springs will be definitely be changed for a long time. The process of tree waste removal will take weeks to complete.

In addition to the primary storm paths, visual damage to timber stands could be seen beyond the direct storm path. The majority of timber damage in these areas would be classified as minimal to light.

RECOMMENDATIONS

With the damage inflicted by the EF-2 tornado, there will likely be three distinct categories by which landowners make their evaluations:

- 1) Light damage or losses that may not warrant a salvage operation. This could include merchantable stands (trees are large enough to sell) which simply don't have enough timber damage to warrant a commercial harvest, or pre-merchantable stands where there is a good chance they will recover over time. These areas will be outside the primary storm path.
- 2) Stands with severe to catastrophic damage, mandating a salvage operation to recoup whatever value can be obtained from the stand. This will include a complete harvest for widespread damage, or a partial harvest of damaged timber to provide a commercial harvest. Salvage operations need to be enacted rapidly before wood degradation such as blue-stain occurs.

Stem quality is also commonly degraded in tornado-damaged timber, due to the extreme twisting and snapping of the trees.

- 3) Stands with moderate damage or situations falling between the two scenarios above, in which a good bit of timber is damaged but there might be enough timber to leave growing. In these cases, landowners are encouraged to use the services of a professional forester to help make the best decision for the situation.

For landowners facing a complete harvest to salvage their damaged timber, please consider reforesting the area. Contact your local Farm Service Agency (FSA) about potential cost-share assistance with site preparation and tree planting. Landowners enrolled in the Conservation Reserve Program (CRP) who have damage to the enrolled acreage should report to the Farm Service Agency.

Landowners are encouraged to utilize professional foresters and arborists to help with decisions about timber management or potentially hazardous trees around homes and urban environments. Seeking independent advice is a sound way to prevent hasty judgments and insure all available options are considered.

ADDITIONAL PHOTOS



*Special thanks to other GFC personnel who helped develop this Timber Damage Assessment:
Chip Bates- Forest Health Coordinator, Lynne Womack- Forest Health Specialist,
Benjamin Brogdon- Ranger 2*

National Weather Service (NWS) - GIS data.

These resources can help forest landowners learn more about options and considerations for trees that have been damaged by severe weather:

TIMBERLAND SEVERE WEATHER DAMAGE:

Wind Wood Utilization (this has numerous documents and links that are beneficial):

<http://www.windwoodutilization.org/salvage.asp>.

How to Evaluate and Manage Storm-Damaged Forest Areas:

<http://www.forestpests.org/storm/>.

Evaluation and Management of Storm Damage to Southern Yellow Pine

http://www.ncforestservice.gov/Managing_your_forest/pdf/EvaluationMngt-StormDamageSYellowPines.pdf.

TIMBER SALES:

Selling Your timber (General Advice)

<http://www.gatrees.org/forest-management/private-forest-management/timber-selling/>.

Selling Your Timber

<http://www.gfc.state.ga.us/resources/publications/sellingyourtimber.pdf>.

TAXES:

National Timber Tax website (Master Index has good list of subject areas):

<http://www.timbertax.org/>.