



TIMBER IMPACT ASSESSMENT

Central Georgia Tornado Damage January 12, 2023

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BACKGROUND

On January 12, 2023, the National Weather Service (NWS) confirmed that eight tornadoes struck Central Georgia from 3:08 PM to 5:01 PM. Figure 1 displays the path of each tornado. These tornadoes covered approximately 143 miles of rural and urban landscapes. This information was provided by the NWS. In addition, the NWS has created a report giving detailed information on each tornado. The Peachtree City, Georgia report can be viewed at [January 12, 2023 Tornado Outbreak \(weather.gov\)](https://www.weather.gov/atlanta/January_12_2023_Tornado_Outbreak). The severity of the tornadoes in terms of timber damage ranged from minimal to catastrophic. Georgia Forestry Commission (GFC) foresters conducted aerial surveys of the tornadoes in central Georgia. GFC foresters followed the aerial surveillance with ground surveys. These surveys found minimal to moderate timber damage from the smaller tornadoes. The primary tornadoes impacting the most timber were the Standing Rock-NW Troup tornado (EF-2), the Troup-Lagrange tornado (EF-2), Meriwether-NW Pike-SW Spalding tornado (EF-2), Pike-Spalding-Henry tornado (EF-3), and Spalding-Butts-Newton-Jasper tornado (EF-2). Timber damage within the primary paths of all of these tornadoes was either moderate or severe. Additional timber damage was visible in some areas within a two-mile radius of the direct tornado path.

OBSERVATIONS

Local GFC foresters surveyed the primary areas impacted by the eight EF-0 to EF-3 tornadoes hitting Central Georgia. Overall, the Timber Impact Assessment revealed moderate to severe damage (Figure 2) in rural forested areas, with the majority of the area being severe where the storms were on the ground. Tornado-impacted areas had predominantly snapped and uprooted trees (Figures 3 and 4). In addition to pine timber being snapped and uprooted, 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.

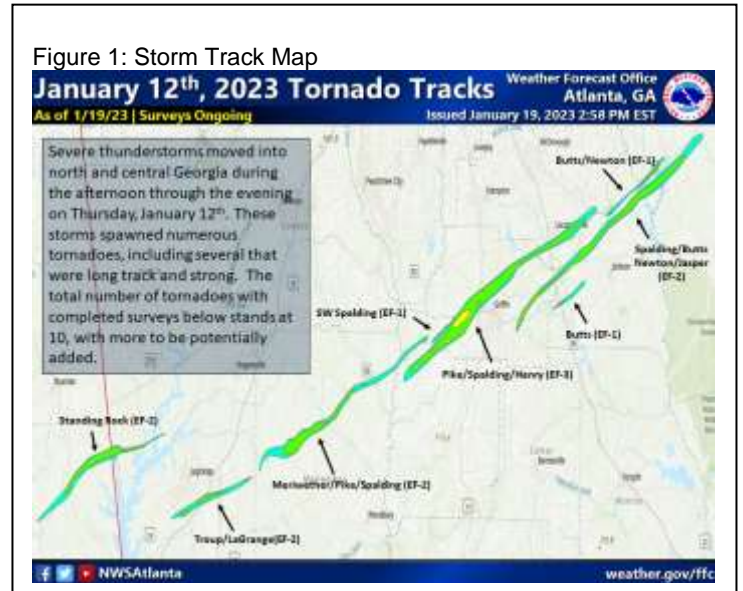


Figure 1: Storm Track Map

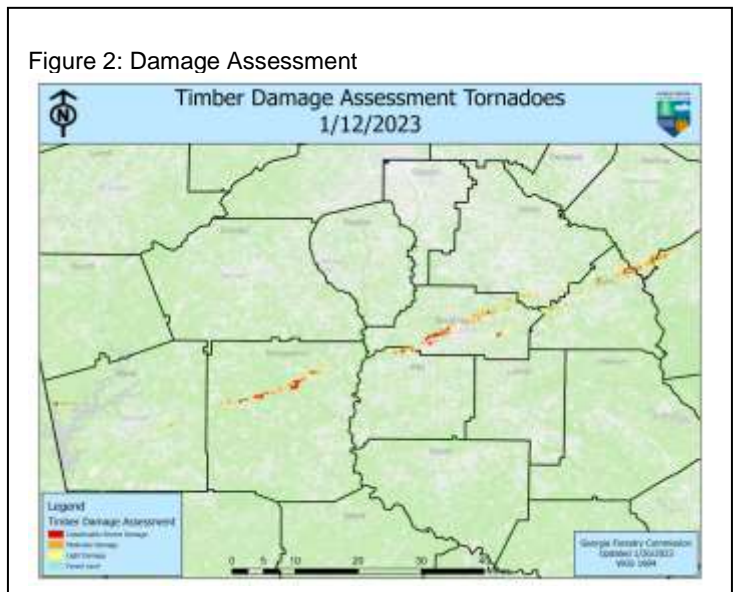


Figure 2: Damage Assessment

Figure 3: Callaway Rd – Meriwether County



Figure 4: Allie Rd – Meriwether County



EXTENT OF DAMAGE

Rural Timber Assessment

GFC foresters developed estimates of timber damage acreage and value. These estimates do not include areas outside the primary tornado path, areas of minimum damage or urban areas. Table 1 shows the estimated timber damage by county and timber type.

Table 1: Timber damage by county and timber type, with totals

County	Pine Timber Acres	Pine Timber Value	Hardwood Acres	Hardwood Value	Mixed Forest Acres	Mixed Forest Value	Total Acres	Total Values
Butts	2,433	\$1,642,422	795	\$572,604	620	\$446,266	3,848	\$2,661,292
Henry	496	\$335,060	386	\$278,135	87	\$62,769	970	\$675,964
Jasper	426	\$287,473	584	\$420,806	125	\$89,669	1,135	\$797,948
Meriwether	3,336	\$2,251,744	1,430	\$1,029,437	526	\$379,014	5,292	\$3,660,195
Newton	753	\$508,294	824	\$592,939	181	\$130,501	1,758	\$1,231,734
Pike	316	\$213,015	214	\$154,199	167	\$120,413	697	\$487,628
Spalding	2,085	\$1,407,340	2,836	\$2,041,902	1,243	\$894,933	6,164	\$4,344,175
Troup	631	\$426,030	476	\$342,986	200	\$144,112	1,308	\$913,127
Totals	10,476	\$7,071,378	7,545	\$5,433,008	3,149	\$2,267,677	21,170	\$14,772,063

Total of 21,170 acres of timber damaged with a total value of \$14,772,063.

Table 2: Damaged acres requiring reforestation

Forests damaged at the moderate level or higher will likely require reforestation. Table 2 shows the number of acres per county that fall into this category.

Overall, there were approximately 143 miles affected by the tornadoes. In addition to the rural areas, many urban trees were destroyed or severely damaged. Without doubt, the landscape within the tornadoes' paths will be changed for a long time. The process of tree waste removal will take months 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 light.

County	Reforestation Acres	Cost to Reforest
Butts	1,859	\$464,638
Henry	396	\$99,021
Jasper	641	\$160,291
Meriwether	3,226	\$806,569
Newton	1,025	\$256,310
Pike	472	\$117,925
Spalding	3,895	\$973,699
Troup	644	\$161,125
Totals	12,158	\$3,039,578

RECOMMENDATIONS

With the damage inflicted by the various tornadoes, 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. In most of these cases, salvage is not practical and the stand should be monitored for beetle infestations or tree mortality over the next growing season.
- 2) Stands with moderate damage, in which a significant portion of the timber is impacted but some viable trees remain - A decision will have to be made to continue managing the stand through partial salvage or start over with a complete salvage. Landowners are encouraged to use the services of a professional forester to help make the best decision for the situation.
- 3) Stands with severe damage, mandating a salvage operation to recoup whatever value can be obtained - 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 occurs. Stem quality is commonly degraded by a tornado through the extreme twisting and snapping of the timber. Stumpage prices will be negatively impacted by this, as well as the difficult logging conditions created by the storm.

Landowners facing a complete harvest to salvage their damaged timber should consider reforesting the area. Programs, such as the Emergency Forest Restoration Program (EFRP), offer cost-share assistance with the practices necessary to restore forests after natural disasters. Apply for EFRP at the local USDA –Farm Service Agency (FSA) office listed below.

Troup - Meriwether FSA
408 N. White Street
Carrollton, GA 30117
Office: (770-834-2097 ext2
Fax: (855) 514-3345

Pike-Spalding-Henry- Butts FSA
231 Highway 41 N, Suite C
Barnesville, GA 30204
Office: (770) 358-0787 ext2
Fax: (855) 501-2459

Newton FSA
111 E Spring St
Monroe, GA 30655
(706) 769-3987
(855) 596-4587 Fax

Jasper FSA
130 Sparta Hwy
Eatonton, GA 31024-8484
(706) 485-2341
(855) 546-2700 Fax

Landowners enrolled in the Conservation Reserve Program (CRP) who have damage to the enrolled acreage should report to the Farm Service Agency.

Urban Forestry Assessment

Using the tornado tracks and damage reports compiled by the NWS and GFC’s GIS staff, as well as additional information provided by GFC field personnel, staff from the Urban and Community Forestry Program (U&CF) conducted field assessments to determine the damage to community forests in the cities of Griffin, Lagrange, and Locust Grove. These cities received significant to catastrophic damage to the tree canopy in certain residential and commercial areas, especially in Griffin (Figures 5-6). Most of this damage was experienced on private property. However, trees on public property within parks, city rights-of-ways, government building grounds, and particularly around Griffin High School suffered damage. Preliminary surveys indicate that the majority of trees damaged will not be salvageable. Further tree risk assessments on public property, with the intent to ensure public safety and determine what trees need to be removed or can remain in the landscape, will likely follow debris removal from streets to allow access and infrastructure repair. Contact with the City Attorney and City Arborist in Griffin has been established to discuss a possible Urban Forest Strike Team deployment, although that task is currently being covered by the City’s contractors. GFC is prepared to help with any tree assessments in the community, and there are plans for GFC to engage with the city on long-term canopy restoration efforts through grants and technical assistance. It is important to note the City of Griffin was very prepared with a formal Community Forest Storm Mitigation Plan that has greatly reduced the time needed to mitigate public risk and manage storm debris.

U&CF staff also did a preliminary assessment of tree damage at the UGA Griffin Campus. Tree damage was severe and widespread across the campus. The tree assessments on campus are being conducted by contractors as well. GFC is prepared to assist the campus however is needed if requested by UGA staff.

Urban tree canopy damage on public property was limited in the cities of LaGrange and Locust Grove. GFC will also make efforts to engage with those communities on long-term canopy restoration and improvement efforts.

The U&CF Program will remain in contact with all the cities impacted to offer technical and financial assistance, such as application to the GA ReLeaf Program, to help recover canopy lost during the tornadoes.

Figure 5: Locust Grove, GA



Figure 6: Griffin, GA



ADDITIONAL PHOTOS

Figure 7: East McIntosh Rd - Spalding County



Figure 8: Steward Rd – Troup County



Figure 9: Locust Grove – Henry County



Figure 10: Newnan Rd – Spalding County



Special thanks to those who helped develop this Timber Damage Assessment:

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Seth Hawkins – GFC SCFP

Scott Griffin – Chief of Forest Management

Troy Clymer – GFC Associate Chief of Forest Management

Clay Chatham & Kenny Beck – GFC Air Ops

Ben Hammond – GFC Land Management

National Weather Service (NWS)

ADDITIONAL RESOURCES

TIMBERLAND SEVERE WEATHER DAMAGE:

Natural Disaster Recovery:

<https://gatrees.org/forest-management-conservation/natural-disaster-recovery/>

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.ncforestservation.gov/Managing_your_forest/pdf/EvaluationMngt-StormDamageSYellowPines.pdf

TAXES:

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

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

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 reduce hasty judgments and insure all available options are considered.