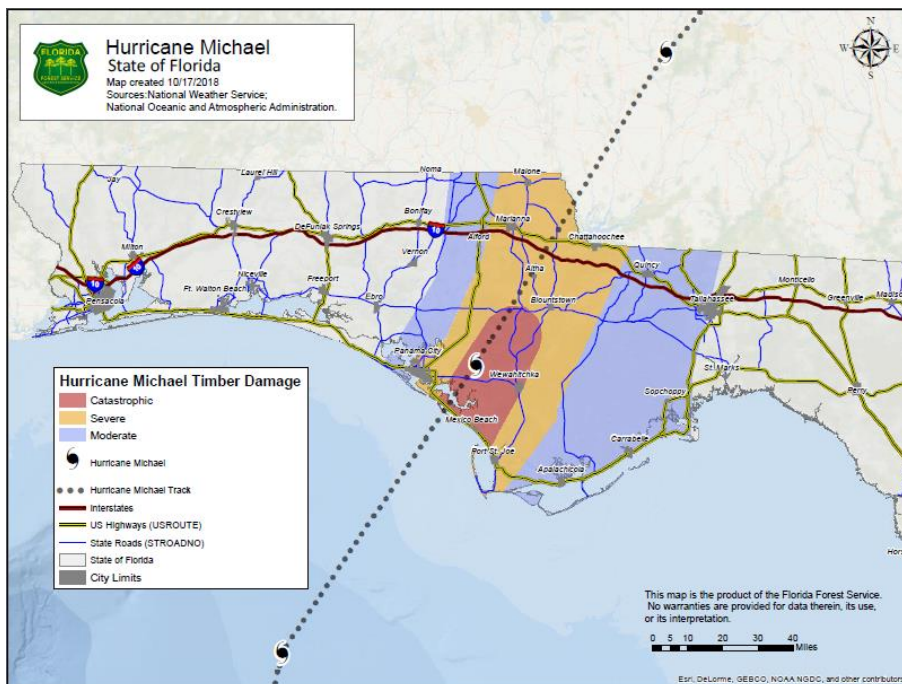


Florida Emergency Hurricane State and Private Forestry Programs

INTRODUCTION

This request provides a summary of Hurricane Michael's impact on Florida's forest resources, an overview of damages and mitigation actions prescribed in response.



SUMMARY

Hurricane Michael made landfall near Mexico Beach, FL on Wednesday, October 10, 2018 as a **Category 4 major hurricane**. With destructive windspeeds and a devastating storm surge, Michael was **one of the most intense hurricanes to ever make landfall in the United States**. Winds topped at 155 miles per hour and only slightly diminished as the hurricane moved through, exiting the state and still impacting land with wind gusts of 125 – 150 miles per hour. **The eye of Hurricane Michael was unprecedented, leaving damage across an 80-mile wide swath that encompassed 11 counties in the Florida Panhandle.**

Timber damage ranges from catastrophic (95% loss) to severe (75% loss) and moderate (15% loss), totaling an **estimated 2.8 million acres**. Utilizing FIA volume data to calculate average tons per acre and applying average TimberMart-South product stumpage prices, **a total timber loss value has been conservatively estimated at \$1.3 billion.**

Approximately **72 million tons of timber is broken or blown over**, equating to **2.5 million log trucks of wood on the ground**. **Salvage operations are highly challenged** by this extensive volume of timber, impeded road access, contractor availability and market conditions. These **limitations on timely removals create increased fire danger across the large geographic impacted area.**

Following this catastrophic event, **additional resources are needed to recover** the Florida Panhandle forests, in part, as **this vital resource provides healthy watersheds and is critically important in retaining jobs**, especially in the hardest hit counties who rely heavily on this industry.



Florida Emergency Hurricane State and Private Forestry Programs

LANDOWNER ASSISTANCE: Crop Loss Payments and Reforestation

Over 16,000 forest landowners were impacted by Hurricane Michael and have few options for recovery. Unlike annual crops, timberland insurance is not commonly available. In addition, forest landowners have up-front costs that are not realized on their investment until harvest. With this overwhelming loss of income, these landowners will not be inclined to reforest without some support. **More than 1,389,850 acres of pine timber sustained catastrophic and severe losses** with additional pockets of blowdown in the moderate loss area. These forest landowners need assistance with both bridging their investment gap and reforestation through the Wildfires and Hurricanes Indemnity Program or Tree Assistant Program funding and with Florida Block Grants.

Crop Loss Payments for Landowners Committed to Reforestation

50% of Estimated Landowner Need: \$369,978,426

- Calculations based upon catastrophic and severe damage acreages for pine and hardwood acreages.
- Based upon average tons per acre per age class and expected products from each age class.
- Values calculated on TimberMart-South 3rd quarter 2018 Region 2 prices.
- If stand has been salvaged, photographs and stump cruise will be used to determine payment for loss.
- Applicants will have a formal written commitment to reforest land.
- Limited to 15,000 acres per entity.
- Loss based on age of stand.

Reforestation 75/25 Cost Share

Estimated Landowner Need: \$182,519,925

- Approximately 486,720 pine acres will qualify under a 75/25 incentive payment.
- Maximum of \$375 per acre to the landowner.
- Funding will be used to pay for site preparation, seedlings and planting of appropriate species to the site.
- Applicants will have on-site needs assessed by a forestry resource professional.
- No Adjusted Gross Income test for landowners in Block Grant categories.
- Limited to 15,000 acres per entity.

Total Request: \$552,498,351



Over 16,000 forest landowners were impacted by Hurricane Michael.



Florida Emergency Hurricane State and Private Forestry Programs

WILDFIRE: Prevention + Mitigation, Suppression and Hazardous Fuel Reduction

The volume of dead and down fuels left in the aftermath of Hurricane Michael has created the **potential for a significant increase in the number, intensity and duration of wildfires over the next 3-10 years**. Typically, there are 4.87 tons per acre of available fuel. Our new reality is an average of 58 tons per acre, a **ten-fold increase in the amount of fuel on the ground**. In the catastrophic area, there are over 100 tons per acre.

Fire managers anticipate a **substantial surge in the difficulty of suppressing wildfires in both the wildlands and the wildland urban interface (WUI)**. According to the Communities at Risk layer in the Southern Wildfire Risk Assessment Portal, there are **518 communities at risk**. Communities in the severe and catastrophic areas have over 1,000 miles of perimeter potentially exposed to these new heavy fuel loads.

The **amount of large fuels on the ground far exceed the ability of current suppression resources**. The response to this situation requires a multi-pronged approach of wildfire prevention and mitigation, suppression and hazardous fuel reduction.

A wildfire prevention team will help educate residents and visitors of the increased potential of wildfire danger and measures that can be taken to help prevent wildfire starts. To provide adequate suppression forces, increased cooperation with local fire departments as well as additional positions and heavy fire suppression equipment, including a Type III helicopter, are imperative.

Wildfire Prevention and Mitigation:	\$ 720,000
Wildfire Suppression:	\$18,769,600
<u>Hazardous Fuel Reduction:</u>	<u>\$ 5,419,450</u>
Total Wildfire Request:	\$24,909,050



Florida Emergency Hurricane State and Private Forestry Programs

FOREST HEALTH

Forest health threats are expected after flooding and severe wind damage. Pine bark beetles, including Southern Pine Beetle, and **invasive species are likely to invade** hurricane-impacted areas and **detrimentally affect forest regeneration and restoration on state and private lands**. Remaining standing timber, stressed by hurricane force winds, will become more susceptible to bark beetle infestations. Invasive species expected to invade include cogon grass, kudzu, Chinese privet, Chinese tallow and Japanese climbing fern. Funding is required for additional surveying and monitoring of insect pests and control of invasive species on private and public lands as well as education and outreach to landowners. Funding also supports a temporary position to coordinate treatment and education programs. Invasive plant treatment costs are expected to average about \$150 per acre.

Request: \$1,200,000

URBAN and COMMUNITY FORESTRY PROGRAM

Florida Panhandle **communities sustained significant damage** to their **urban forest canopy**. Many trees are wind damaged while other trees are expected to drown following prolonged inundation. Approximately **776,000 people live in the 11-county impacted area** and rely on the numerous values of the urban forest. The loss of tree cover has and will continue to create **negative economic, ecological and aesthetic consequences**. These include **decreased property values, loss of tourism appeal, cleanup and recovery costs, increased storm water runoff, loss of energy conservation benefits and degraded air quality**. Damaged trees also pose **safety hazards to citizens and structures**. In many cases, enhancements to remaining urban forests are needed to improve their overall health and to reduce damage from future storms. A significant portion of homes, communities and recreational activities in the Florida Panhandle are part of the wildland urban interface. With industry partners and community cooperatives, educating homeowners and citizens about tree care, defensible space and the non-timber benefits of trees will be a crucial mission. Helping these communities restore and properly manage its forest resources will ensure the long-term success of recovery efforts.

Request: \$1,240,000



Florida Emergency Hurricane State and Private Forestry Programs

FOREST INVENTORY and ANALYSIS (FIA)

There is an **immediate need to reanalysis timber inventories in the impacted zones**. This data is necessary to provide post hurricane forest inventory numbers that will **help future forest management decisions**. The FIA program will provide that information through early plot remeasurements. This would necessitate measurement of 166 FIA plots during a three to four-month period. Funding includes out-of-state crews to conduct these plot measurements.

Request: \$400,000

FOREST STEWARDSHIP PROGRAM

Nearly 80%, or 2.2 million acres, of the timber damaged by Hurricane Michael is privately owned. In the catastrophic and severe impact areas, approximately 9,000 landowners own at least 10 acres of forest and an additional 7,900 own forest acreage in the moderate impact area, totaling **over 16,000 forest landowners in the 11-county impacted area**.

Due to the severity and breadth of damage to stands as well as processing facilities, **private landowners have few options**. Unlike annual crops, timberland insurance is not commonly available. In addition, forest landowners have up-front costs that are not realized on their investment until harvest. **Without guidance and assistance, many of these landowners may not elect to clean-up and re-establish their forests**. These losses would be felt both in the number of forestry related jobs and the water quality and quantity important to groundwater as well as outflows to the Gulf of Mexico.

To provide adequate technical assistance for landowners to keep forests as forests, additional staff is imperative to deliver the message and incentive funding for both losses incurred and reforestation. Funding includes additional temporary technical staff to augment existing service forester positions and consultants writing landscape scale forest recovery plans, LiDAR data to inform where to strategically incorporate outreach resources, outreach materials and increased nursery production to meet the needs for reforestation during the next planting year.

Request: \$2,540,000

FLORIDA EMERGENCY HURRICANE STATE and PRIVATE FORESTRY PROGRAMS REQUEST 2018

Landowner Assistance: Crop Loss Payments and Reforestation	\$552,498,351
Wildfire Prevention and Mitigation	\$ 720,000
Wildfire Suppression	\$ 18,769,600
Hazardous Fuel Reduction	\$ 5,419,450
Forest Health Program	\$ 1,200,000
Urban and Community Forestry Program	\$ 1,240,000
Forest Inventory and Analysis (FIA)	\$ 400,000
Forest Stewardship Program	\$ 2,540,000
Total Request	\$582,787,401

