



Region Eight Fire Risk Management

Prescribed Fire Fuels and Planning



Safety Bulletin

Date: February 25, 2025

R8-FAM-RM-2024-02-1

Subject: Fuels and fire management in hurricane damaged areas in the Southern Appalachians, Piedmont, and Coastal Plain.

Topic: Hurricane Helene and Milton caused significant disruption to forested landscapes, resulting in altered fuel structure across the southeast particularly in the Southern Appalachians of southwest Virginia, western North Carolina, northeast Tennessee, northeast Georgia as well as the Piedmont of South Carolina, central Georgia and north Florida.

Hazard awareness: The damage severity in impacted areas will range from catastrophic to light (see the reference table below). The following hazards may be increased in areas that where more severely impacted:

- Increased fuel loading above normal. Expect an increase in fine 1 hour fuel loading, and a significant increase in heavy 100-1000 hour fuel loading, especially in subsequent seasons.
- Increased fire behavior to include rates of spread (ROS), flame length (FL), and spotting distance.
- Access and egress within project areas and or during wildfire response may be delayed due to site-specific conditions such as soil instability, erosion, soft shoulders, etc. These limitations may impact previous medical evacuation plans
- Containment lines for prescribed fire and wildfire may be impacted by downed fuels across existing lines or natural barriers, as well as heavier fuel loading for line production.
- Increased environmental hazards such as slips, trips, and falls as well as overhead hazards due to damaged tree.
- Duration of planned RX and wildfires may be increased leading to increased personnel commitment, longer fuel consumption rates, and increased burning periods and smoke production.
- Planning resources and tools previously used may not reflect current storm damage.

Damage Severity	% of overstory	Similar to NDVI Impact Type
Catastrophic	>50%	Type 1 (NVDI Change \leq 20)
Severe	34-50%	Type 2 (NVDI Change \leq 13)
Moderate	26-33%	Type 3 (NVDI Change 6-12)
Light	<25%	Type 4 (No to minor impacts)



Mitigations: All fire personnel working in hurricane impacted areas need to communicate the increased risk associated with hurricane impacts. Consider the following before engaging in operations in these areas:

- Has an updated Risk Analysis (for wildfire), Prescribed Fire Plan (for RX), or Fuels Inventory been completed in the areas you are working?
- Have responding personnel been briefed on the increased risk of fire behavior, fuel loading, access limitations, and physical hazards?
- Have alternate strategies for implementation and containment been discussed with Agency Administrators, Fire Management, and Fire Planners?
- Consider additional risk management communication tools such as Tailgate Safety Sessions, Fire Safety Briefings, Risk Analysis, USFS Risk Calculator App, or other tools to communicate the localized hazards to new or incoming resources.
- Previously identified medevac, short haul, or helicopter landing spots may no longer be adequate due to changes in the landscape caused by Hurricane Helene. These locations should be reevaluated for suitability and safety before being incorporated into any plans or operational strategies.

Fire managers may need to alter strategies and tactics in impacted areas to include additional resources, improved containment or control lines, and increased time commitment to fire and project areas.

Additional Resources: For additional resources and information, click or scan on the QR codes below:



Fuel Loading
Guidance



SACC Fire Danger
and Fuels



Risk Analysis
Worksheet (Blank)



HiForm: Southern
Appalachians

For more information contact:

Heath Bell, Fire Risk Management Officer, heath.g.bell@usda.gov

David Quisenberry, Regional Fire Management Planner, david.quisenberry@usda.gov