



# Mapping Fires Across the Southeast

## Science to Solutions

### In Brief

Fire is essential for healthy and resilient working lands and conservation areas. Tracking the locations and characteristics of prescribed fires and wildfires is essential for wildfire risk mitigation and natural resource management. Scarce data exists for tracking fires across public and private lands. The Southeast FireMap (SE FireMap), funded by NRCS and managed by Working Lands for Wildlife staff, is a fire tracking map to allow for improved decision making. Tracking fires can better prioritize funding for staff, projects, training and equipment to more effectively manage fire risks. The SE FireMap, version 2.0 is currently under development, is an operational decision-support system that provides real time data to resource managers for fire and land management and conservation planning.

### Future of Fire Mapping

The SE FireMap version 2.0 will have standard query options, spatial data, and pdf map downloads to aid in fire management. It's remote sensing technology will track prescribed fires and wildfires across the Southeast and provides improved map resolution over other regional and national systems currently in use.

In the future, the SE FireMap will also identify existing priority databases in use, test mapping accuracy, reduce error rates, and use a more accurate mapping scale.

Continuous coordination with fire mapping experts is crucial for the SE FireMap's success, future expansion and adoption in other U.S. regions.

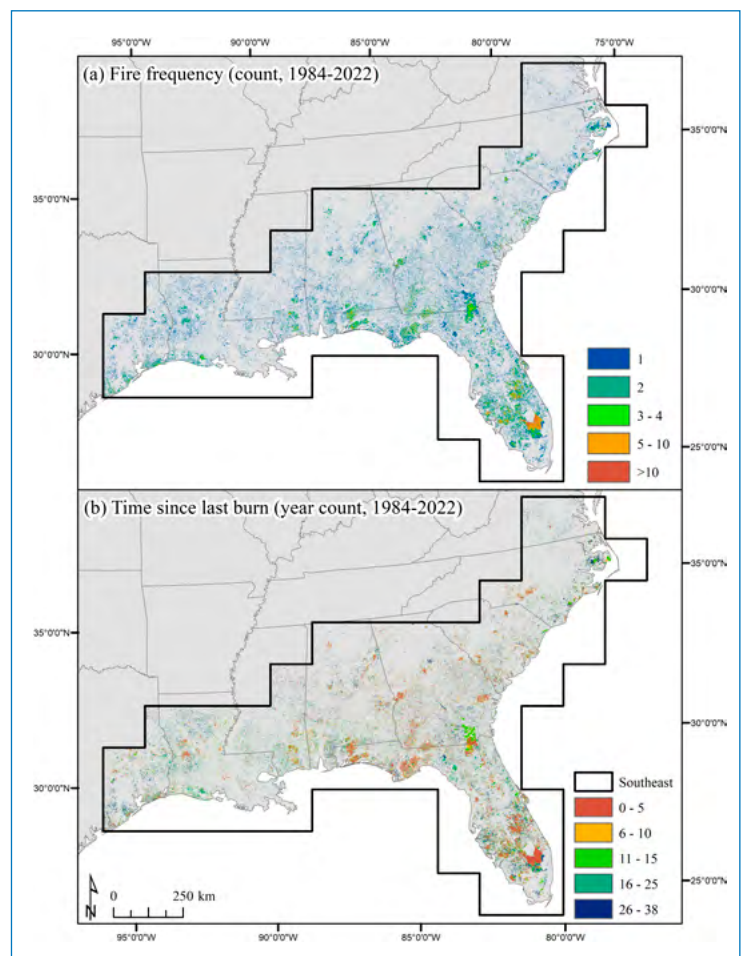
### Southeast Fire Map Development

Under an agreement with the U.S. Endowment for Forestry and Communities (Endowment) in 2020, NRCS funded the creation of the SE FireMap.

The Endowment and NRCS lead a regional consortium of partners to conduct the work.

NRCS established a Technical Oversight Team (TOT) of subject matter experts representing diverse partners as an advisory group to guide the project through all phases:

- Initial Scoping — 2021
- Development — 2022
- Target Completion — 2026



Sample output from the SE FireMap. This data can help NRCS and partners assess and enhance conservation efforts in fire dependent ecosystems across the Southeastern.





## Development Phase Objectives

Soliciting input from decision-support tool users will be valuable to understand users' intended uses for the map, analysis needs, and to prioritize complementary data sources. Developing web-enabled decision-support tools such as a web mapping application that can host web layers is needed to ensure data is delivered to users as quickly as possible to facilitate decision making.

Creating Landsat Burned Area (B.A.) products and incorporating harmonized Landsat Sentinel-2 data and other fire metrics allow the map to produce accurate burned area outputs with greater temporal frequency.

Predicting uncertainties in the burned area products and inform users on the degree of data confidence and its limitations will help focus user expectations. Advancing remote sensing data and methods will improve fire detection and burned area products to provide users with more comprehensive fire histories.

Assessing regional patterns and impacts of burning will aid in interpreting cultural, geophysical and historical drivers of prescribed fire to increase and document the effectiveness of NRCS programs assisting landowners with fire management and ecological restoration.

Producing training, documentation and outreach materials will support the decision support tools and web mapping application. NRCS and the Endowment partnered with Tall Timbers Research, Inc. (TTR) and the U.S. Geological Survey (USGS) to address these objectives.

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WLFW and provides leadership for this project as well as the Southeast Longleaf Ecosystems Occurrences Geodatabase (LEO GDB) project [www.fnai.org/species-communities/southeast-longleaf](http://www.fnai.org/species-communities/southeast-longleaf), which will be used to complement the SE FireMap once it's finalized.

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Joe Noble has been the primary PI for the SE FireMap project since its inception as the grand finale of a career of fire mapping.

### Photo credits:

John McGuire, Tall Timbers Research, Inc.

