

# FIRE ANALYSIS OF THE THOMAS FIRE IN CALIFORNIA USING NASA DATA IN A GIS

NASA  
 Olney, Maryland, USA  
 By Ross Bagwell, Byron Peters, and Minnie Wong

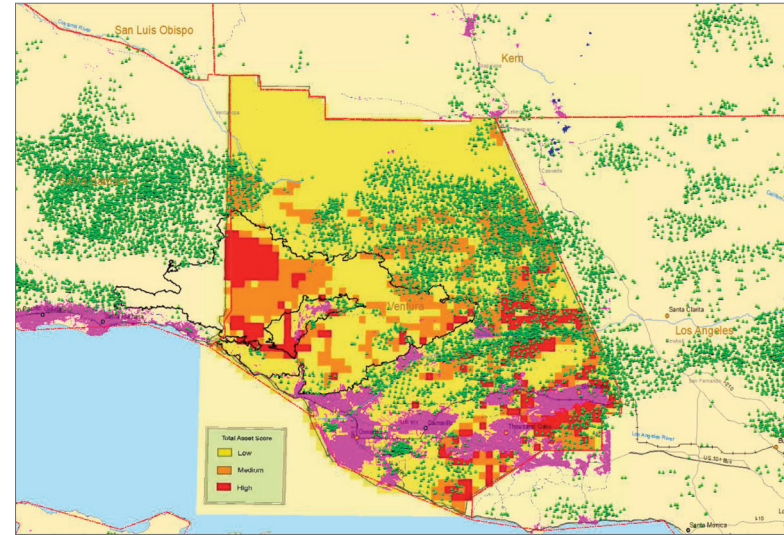
These maps are an analysis of the Thomas Fire that occurred in California during December 2017. Using a variety of NASA Earth science data from five National Aeronautics and Space Administration (NASA) sources (including four Earth Observing System Data and Information System Distributed Active Archive Centers and NASA Fire Information for Resource Management System), as well as ancillary data from Ventura County, Santa Barbara County, and the Department of Homeland Security, this analysis sought to identify forest fire risk zones, create a fire occurrence density map, examine the vegetation and subsequent burn scar, capture the affected parcels, and capture the affected vegetation.

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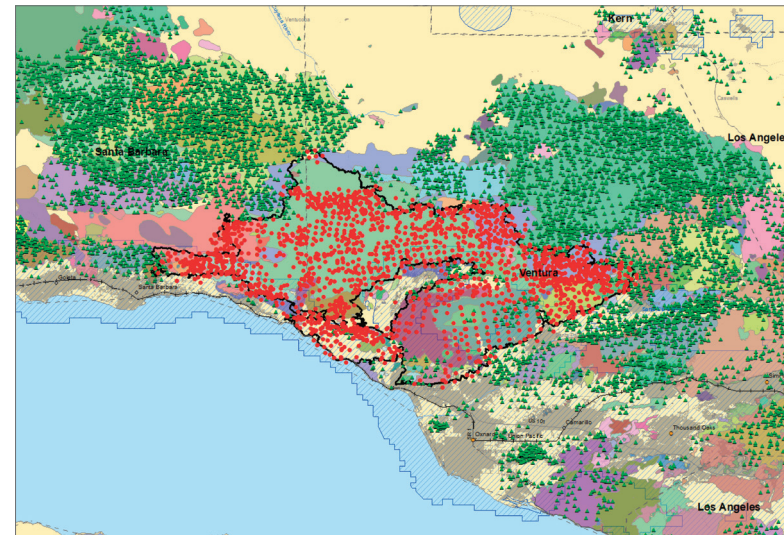
**SOFTWARE**  
 ArcGIS Desktop 10.5

**DATA SOURCES**  
 NASA

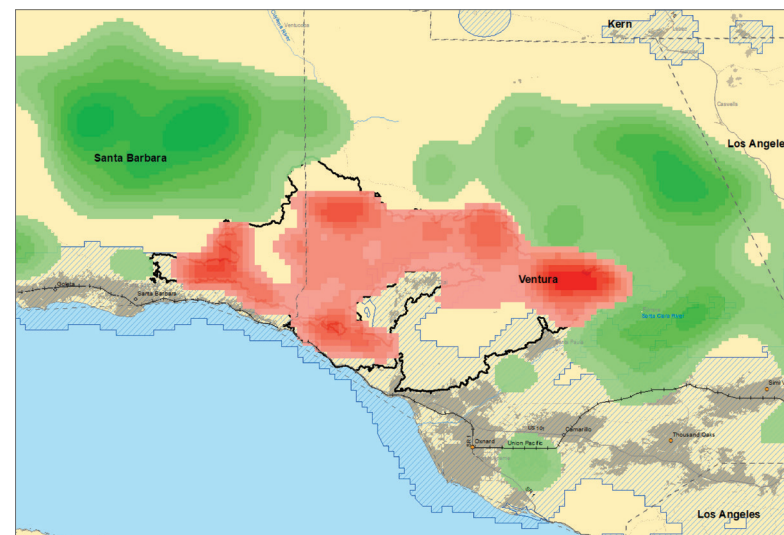
Courtesy of NASA.



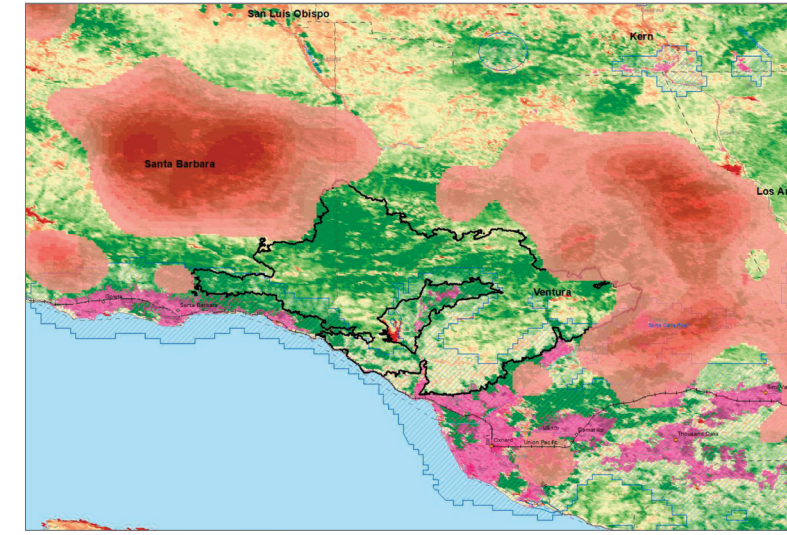
NASA FIRMS hotspots in Ventura and Santa Barbara counties



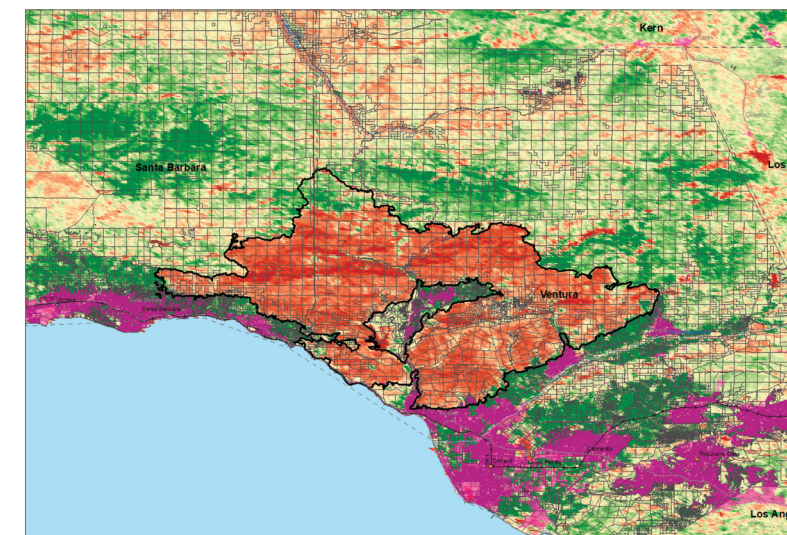
NASA FIRMS Active Fire Hotspots in Ventura and Santa Barbara Counties



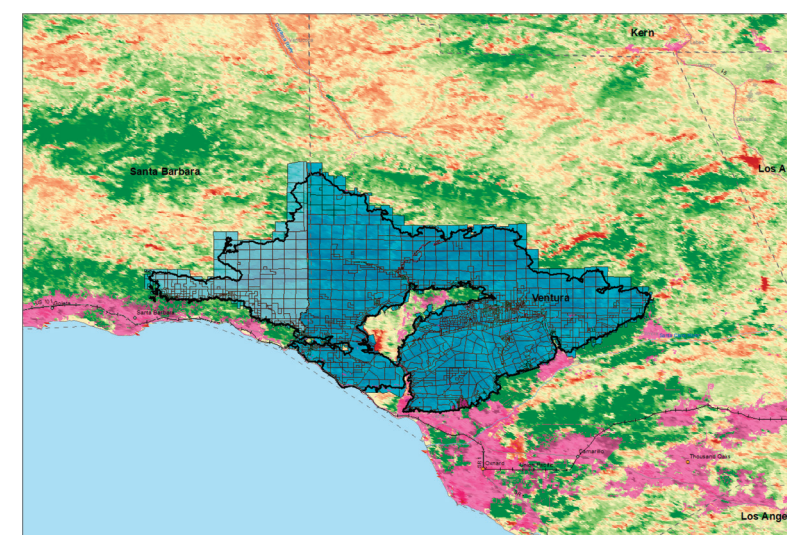
Kernel Density of the NASA FIRMS hotspots



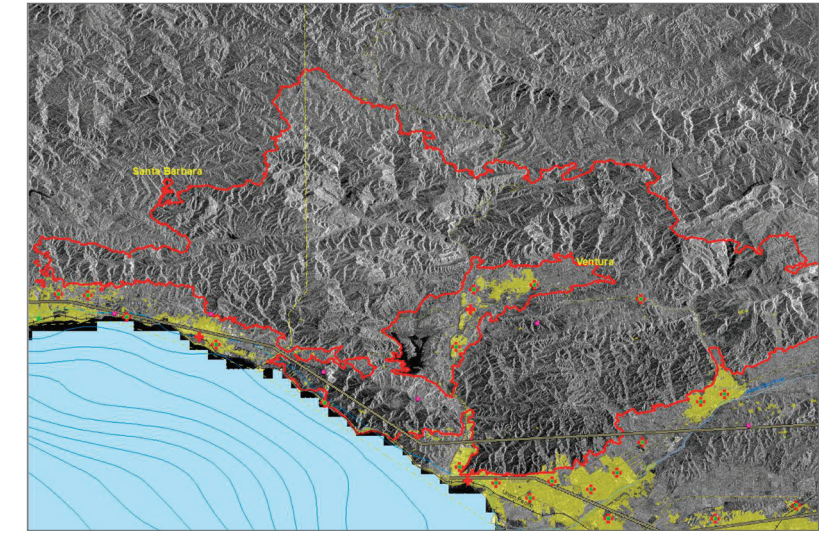
NASA Normalized Difference Vegetation Index (NDVI)



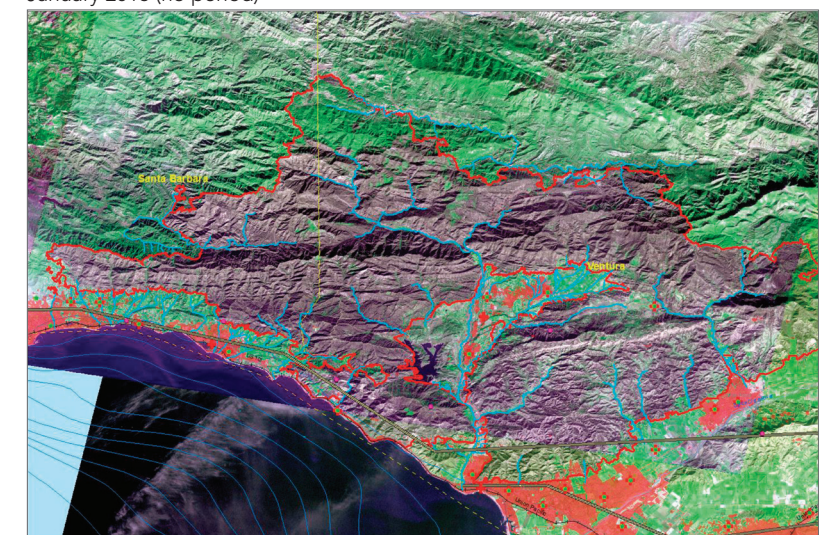
Enhanced Vegetation Index (EVI)



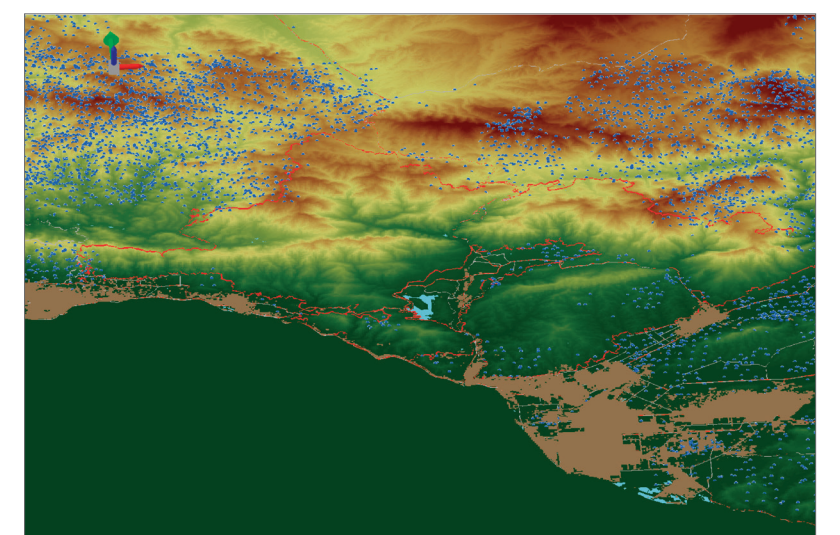
Intersection of the Thomas Fire containment boundary



Copernicus Sentinel-1A Synthetic Aperture Radar (SAR) data, retrieved on January 2018 (no period)



NASA Aster LIT data, captured on December 26, 2017



NASA Global Digital Elevation Model (GDEM)

