

AN ANALYSIS OF BURN SEVERITY PATTERNS FOLLOWING A NORTH CENTRAL FLORIDA SAND PINE SCRUB WILDERNESS FIRE

David R. Godwin
University of Florida
PO Box 110410
Gainesville, FL 32611
E-mail: drg2814@ufl.edu

Abstract

The Juniper Prairie Wilderness, a 56 km² United States federally designated wilderness area in north central Florida represents one of the largest and best protected tracts of sand pine scrub in the state. Threatened by development and cleared for agriculture, sand pine scrub exists only in small protected pockets, a diminutive legacy of a once vast landscape. A stand replacement, fire dependent ecosystem, sand pine scrub is maintained through infrequent high severity fires. As a wilderness area, the Juniper Prairie Wilderness (JPW) is subject to federal access and management limitations designed to preserve certain ecological and natural qualities for the benefit of future generations. In August of 2006, a prescribed fire escaped initial prescription and ultimately burned an unprecedented 44 km² across the JPW. This project examines the patterns of burn severity following an August 2006 burn. Previous studies in peninsular Florida sand pine scrub burn scar mapping have focused on methods quantifying fire extent, while little work has been done to map burn severities. Sixty field plots were established to collect quantitative burn severity data in the months following the burn. These data will be used to determine the effectiveness of burn severity maps produced from two different remotely sensed sources: a low cost, highly adaptable mosaic of digital images collected from an immediate post-fire aerial survey and a high cost, multi-spectral SPOT 4 satellite scene collected one month following the burn.

[Abstract Only]

In Proceedings of the 6th Southern Forestry and Natural Resources GIS Conference (2008), P. Bettinger, K. Merry, S. Fei, J. Drake, N. Nibbelink, and J. Hepinstall, eds. Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA.