

# VALUE AND STATUS OF STATE-AND-TRANSITION MODELS FOR OAK SYSTEMS: APPALACHIANS AND CENTRAL HARDWOOD REGIONS

James Smith, Randy Swaty, Kori Blankenship, Sarah Hagen,  
Kimberly Hall, Jeannie Patton, and Katherine Medlock



**Abstract**—Quantitative state-and-transition ecosystem models, representing both current and historic time periods, are available for key oak ecosystems in the Central Hardwood and Appalachian regions. These models, originally developed by the LANDFIRE program and modified locally, extensively describe these ecosystems, document and define succession classes, key disturbance rates and pathways, and often highlight areas where more information is needed. Numerous applications, such as the Cherokee National Forest North Zone Plan and the Great Smoky Mountains National Park Landscape Conservation Forecasting project illustrate the values of these models and descriptions to the natural resource management and conservation communities. Over the past 2 years, the TNC LANDFIRE Team led an update and revision process based on the original suite of products with the goal of updating, correcting and improving the efficiency of every model and description. Over that period every LANDFIRE state-and-transition model was made available to any individual willing to participate. Thousands of review products were downloaded and hundreds of expert reviews were received and considered for inclusion. The review and revision process is now complete and revised and updated Biophysical Settings (BpS) quantitative models and descriptions will be available later in 2018.

---

---

Author information: James Smith, LANDFIRE Program Lead, The Nature Conservancy, St. Johns, FL 32259; Randy Swaty, LANDFIRE Team Ecologist, The Nature Conservancy, Evanston IL 60091; Kori Blankenship, LANDFIRE Team Fire Ecologist, The Nature Conservancy, Bend OR 97701; Sarah Hagen, LANDFIRE Team Spatial Scientist, The Nature Conservancy, Minneapolis, MN 55415; Kimberly Hall, Climate Scientist, The Nature Conservancy, Haslett, MI 48840; Jeannie Patton, LANDFIRE Team Communications Lead, The Nature Conservancy, Boulder, CO 80302; and Katherine Medlock, Tennessee Project Director, The Nature Conservancy, Knoxville, TN 37919.

Citation for proceedings: Clark, Stacy L.; Schweitzer, Callie J., eds. 2019. Oak symposium: sustaining oak forests in the 21st century through science-based management. e-Gen. Tech. Rep. SRS-237. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 192 p.