

LANDFIRE Products Inform Colorado Statewide Forest Resource Assessment

(Following summary written by Jeannie Patton, The Nature Conservancy, LANDFIRE Program, excerpted from information provided in the report.)

State assessments and resource strategies are integral to the State and Private Forestry (S&PF) Redesign and required as an amendment to the Cooperative Forestry Assistance Act (CFAA), as enacted in the 2008 Farm Bill.

The [Statewide Forest Resource Assessment](#): A Foundation for Strategic Discussion and Implementation of Forest Management in Colorado, produced by the Colorado State Forest Service and Colorado State University, is the first geospatial assessment completed by the Colorado State Forest Service. The objective of the assessment is to provide a spatial overview of Colorado's forests and display areas in the state where resources are best focused to achieve desired future conditions. LANDFIRE products were an integral part of this assessment.

Colorado's assessment was developed under the leadership and guidance of the Colorado State Forest Service (CSFS) and through a contract with the Colorado Chapter of The Nature Conservancy. The Conservancy worked closely with CSFS personnel to establish and implement an assessment process to accomplish the following:

- Ensure that geospatial data and other information used in the assessment are scientifically valid and meet both state and national guidelines.
- Facilitate meaningful involvement and input from key land management agencies, research entities and other partners.
- Integrate existing state-level natural resource plans as appropriate.
- Allow the CSFS to use the accumulated data to work with partners in identifying emphasis areas throughout the state.

The minimum standards for Statewide Forest Resource Assessments, as described by both the US Forest Service and Congress, specify that each assessment must identify benefits and services provided by forests; analyze the conditions, threats and trends that influence the ability of forests to continue providing these benefits and services; and then identify priority landscapes or other emphasis areas where the investment of forest management resources will produce the most meaningful result.

Process

An interagency, interdisciplinary steering team was established to identify the best available data layers. The team used three national themes identified in the Farm Bill as a guide to review existing geospatial data and determine the most relevant information sources to incorporate into the assessment: 1) conserve working forest landscapes, 2) protect forests from harm and 3) enhance public benefits from trees and forests. The data were then combined to provide a comprehensive overview of the important forest resource areas across Colorado.

LANDFIRE data

All analyses regarding vegetation types, including piñon-juniper, oak shrublands and riparian forests (in addition to more traditional forest types), were based on LANDFIRE vegetation data, (described in Appendix B of the report, *Data Methods and Sources* available at <http://csfs.colostate.edu/pages/statewide-forest-assessment.html>), which serves as the foundation of the entire assessment. To assess the current condition of its forest resources, the team used the LANDFIRE Fire Regime Condition Class Departure Index, a measure of the departure of current vegetation from reference conditions.

Among the findings: In Colorado, LANDFIRE vegetation data indicates that forests and woodlands cover 24.4 million acres of the state, the majority of which are coniferous. Analysis of the data indicates that the forest types on 6.8 million acres have significantly departed from expected reference conditions.

The primary cause of the departure is a management philosophy that virtually excluded fire from the landscape for over a century. As a result of fire suppression, many ponderosa pine forests, for example, currently are denser and contain more dead fuel than they did historically. These heavy fuel accumulations greatly increase the chances for high-intensity, stand-replacing crown fires in forests that evolved with frequent-low-to-moderate intensity fires. (Prior to European settlement, stand-replacing fires would only occur every 200-500 years.)

Purpose and next steps

The Colorado State Assessment is designed to be a living document and is structured to allow incorporation of new data as it becomes available. It will be reviewed and updated at a minimum of every five years.

The assessment will frame discussions regarding forested areas and will help determine appropriate distribution of limited resources to areas where they will be most effective. Through continued discussions across the state, the team will examine the importance of forest resources and how to effectively conserve them. LANDFIRE data will continue to be used as the foundation of further analysis, augmented so as to fill in current data gaps.