



# How can I use LANDFIRE?



## What is this thing called LANDFIRE?

In short, LANDFIRE (Landscape Fire and Resource Management Planning Tools Project) is an interagency project producing consistent and comprehensive data describing vegetation, wildland fuel, and fire regimes across the United States.

## How can you use LANDFIRE data products?

- Do you have landscape-scale assessment needs but lack gapless, consistent cross-boundary vegetation- and fire-related data?
- Do you need data to run fire behavior models at a landscape scale?
- Would you like to learn more about the historical disturbance regimes and vegetation patterns in your landscapes?
- Are you curious about which watersheds in your state are closest to the historical range of variability in terms of vegetation composition and structure?
- Do you need to engage partners in discussions about disturbance regimes or landscape-scale conservation issues?
- Do you need spatial data layers to jump-start your local mapping program?
- Would you like to have ecological models to use as a foundation for testing management scenarios?

Because LANDFIRE is a national project, scale is important. Here's the official line regarding the appropriate scale at which to use LANDFIRE products:

*Although LANDFIRE National products are delivered as 30-meter pixels, they should not be used at the individual pixel level or on small groups of pixels. LANDFIRE National products were designed to support 1) national (all states) strategic planning, 2) regional (single large states or groups of smaller states), and 3) strategic/tactical planning for large sub-regional landscapes and Fire Management Units (FMUs) (such as significant portions of states or multiple federal administrative entities).*

*The applicability of LANDFIRE National products to support fire and land management planning on smaller areas will vary by product, location, and specific use. Further investigation by local experts and LANDFIRE team members will help inform decisions regarding local applicability. However, it is the responsibility of the local user, using LANDFIRE metadata and local knowledge, to determine if and/or how LANDFIRE can be used for particular areas of interest.*

**Bottom line:** check out the data to make sure it is suitable for your application.

## What, specifically, is LANDFIRE producing?

LANDFIRE is producing the first consistent and comprehensive nationwide set of ecological models and ecologically relevant geospatial data. These ecological models and spatial data sets fill gaps for managers, researchers, and on-the-ground practitioners and planners through the incorporation of hundreds of thousands of vegetation plots and satellite imagery and refinement via expert opinion. As mentioned above, in addition to spatial data and ecological models, various partners of LANDFIRE have created helpful tools to assist users of LANDFIRE data. These include:

<ul style="list-style-type: none"> <li>■ <b>Vegetation Dynamics Development Tool</b> (<a href="http://www.essa.com">www.essa.com</a>) – A free ecological modeling tool that allows users to explore disturbance and management scenarios</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>LANDFIRE Data Access Tool</b> – The tool allows users to interact with the LANDFIRE data distribution site and download LANDFIRE data directly from within ArcMap.</li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Area Change Tool (ACT)</b> - This tool allows the user to easily edit ArcGRID raster layers for pre- and post-treatment scenario evaluations.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Fire Regime Condition Class (FRCC) Mapping Tool</b> - This tool produces spatial layers depicting vegetation departure based on FRCC methodology.</li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Fire Behavior Assessment Tool (FBAT)</b> - This tool derives fire behavior characteristics that would potentially occur under user-specified environmental conditions (such as fuel moisture levels and 20-ft wind speeds).</li> </ul>	

See [www.landfire.gov](http://www.landfire.gov) (Data Products > Helpful Data Tools) for more information on available tools.

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### Who works on and with LANDFIRE products?

The principal collaborators on LANDFIRE include: USDA FS Rocky Mountain Research Station Missoula Fire Sciences Laboratory (MFSL), DOI USGS Center for Earth Resources Observation and Science (EROS), The Nature Conservancy (TNC), and the National Interagency Fuels Technology Team (NIFTT). Organizations that work *with* LANDFIRE products include researchers, land managing agencies, the Fire Program Analysis (FPA) project, and the Wildland Fire Decision Support System (WFDSS), to name a few. In addition, several groups create tools that allow LANDFIRE data to be used in a variety of ways.

### LANDFIRE myths & facts

Myth	Fact
It's only about the West.	LANDFIRE is mapping the entire country and products are being created for all 50 states.
It's only about fire.	Fire and fuels are the main reasons the project was initiated; however, the sponsors of this effort envisioned its use for broader resource management. LANDFIRE produces a suite of vegetation layers. Many of the LANDFIRE products incorporate disturbances other than fire (such as flooding and windthrow) and include basic ecological and management information relevant to non-fire-adapted ecosystems. Visit <a href="http://www.landfire.gov">www.landfire.gov</a> (Data Products > Applications) for case studies highlighting the use of LANDFIRE products in assessments of big horn sheep viability, grizzly bear density, and bee pollination.
It's only for the big shots in D.C.	The Forest Service and Department of the Interior are funding LANDFIRE, and products will be used for national strategic initiatives. However, they can be applied regionally and be used by anyone who is interested, including forest, fire, & land managers; researchers; and conservationists.
It's only about Fire Regime Condition Class (FRCC).	FRCC is just one of LANDFIRE's many products; for example, the project is also producing data on existing vegetation, fire regime groups, and succession classes across the entire U.S.
It's too big for me.	LANDFIRE is no doubt a large project, but the USGS National Map LANDFIRE – the project's data distribution site – allows the user to download data for specific regions or landscapes.

### What else do I need to know?

- The initial round of mapping the entire U.S. will be completed in FY09 (check the Schedule section of [www.landfire.gov](http://www.landfire.gov) to view the mapping status of your area).
- Data products are being updated through an operations and maintenance plan. See [www.landfire.gov](http://www.landfire.gov) About LANDFIRE > Updating Products for details on the approach and how to participate in helping improve the LANDFIRE products.
- Visit the Data Products > Applications section of [www.landfire.gov](http://www.landfire.gov) for case studies on uses of LANDFIRE data in, for example, managing fire incidents, fuels planning, and threatened species studies. If you have examples of LANDFIRE products in use and would like to share, please contact us via the link on [www.landfire.gov](http://www.landfire.gov).
- While LANDFIRE provides a well developed set of data with some pre-defined uses, the sky's the limit considering the ability to customize data sets, experts eager to assist in the use of LANDFIRE products, and a growing number of users.

*The LANDFIRE team hopes you will visit [www.landfire.gov](http://www.landfire.gov), contact LANDFIRE staff via [helpdesk@landfire.gov](mailto:helpdesk@landfire.gov), and explore how LANDFIRE data products might help better meet your land management, conservation, research, or other natural resource goals.*

