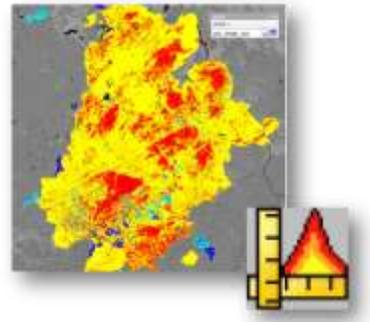# LANDFIRE Total Fuel Change Tool Online Course

The LANDFIRE Total Fuel Change Tool (LFTFC Tool) is a system for editing or updating LANDFIRE fuel attributes to better describe fire behavior characteristics for use in planning and fire analysis. Specifically, the tool is an ArcGIS Toolbar that links to a set of fuel rules that assign spatial areas to certain fuel attributes, such as Fire Behavior Fuel Models, based on LANDFIRE vegetation and disturbance history layers. Users can edit the rules and run the tool to see how changed assumptions about the fuel attributes of specific vegetation types will impact the output fuel attribute grids and the resultant fire behavior characteristics. This course introduces participants to the LFTFC Tool and its uses. Read the individual lesson descriptions below for details on the course contents.

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Lesson 1: Introduction
(approximately 2 hours)

Lesson 1 provides an overview of what the LFTFC Tool is and what it does. It begins with some background information and definitions of key terms, and then explains the basics of how the tool works. After a brief review of potential applications of the tool, the participant will install the tool and complete a tool tutorial.

Lesson 2: Applications
(approximately 45 min.)

Lesson 2 answers the question "Why use the LANDFIRE Total Fuel Change Tool?" It also explains how disturbance information has been integrated into the LANDFIRE data and into the function of the tool. Finally, Lesson 2 provides detailed examples of how the tool has been used in three real-world applications.

Lesson 3: Implementation
(as much time as needed)

The primary purpose of Lesson 3 is to give the participant hands-on experience using the tool. The participant works through an exercise adding recent disturbance events to LANDFIRE data.

Afterwards, the take-home points from the exercise are reviewed. The lesson closes with some final tips on using the tool.

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Required Knowledge

Users of LFTFC Tool need to be familiar with ArcGIS and have a good understanding of:

- Fire behavior and effects,
- Fuel loading models and fire behavior fuel models,
- The role of weather and topography in wildland fire situations, and
- Relationships between disturbances, vegetation attributes, and fuel attributes in their area of interest.

Software Requirements

Users should be aware that tools created by the National Interagency Fuels Technology Transfer, or NIFTT, were developed for Windows operating systems. In addition, the following software is required to run LFTFC Tool:

- ArcGIS 10 and the current service pack,
- The Spatial Analyst extension of ArcGIS, and
- Microsoft Access (2000 or higher, current version preferred)