

Title: Introduction to the Creating Hybrid Structure from LANDFIRE/Lidar Combinations (CHISLIC) Tool

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Workshop: We will present CHISLIC, a recently developed tool that simplifies the incorporation of lidar data into existing LANDFIRE vegetation structure and canopy fuel products. The standard LANDFIRE mapping procedure for the conterminous United States relies on Landsat as the sole source of remote sensing data for informing vegetation structure mapping. Where available, the inclusion of lidar data can provide greater spatial and informational detail about the canopy structure as compared to the standard LANDFIRE products. However, many who are interested in integrating lidar data into LANDFIRE products or simply deriving lidar-based structure maps for their area of interest do not have the expertise in lidar data processing to do so. CHISLIC was developed to address the needs of these users. The tool adapts simple algorithms for deriving canopy height, canopy cover, and canopy base height that are intended to be globally applicable rather than locally optimized. The resultant layers can then be integrated with existing LANDFIRE data to update Landscape files for running fire behavior analyses. Furthermore, CHISLIC was developed to make use of both airborne and spaceborne lidar data so that lidar-based results can be extrapolated beyond areas covered with airborne lidar.

This workshop will provide an introduction to airborne and spaceborne lidar data, a background on lidar data processing, a live demonstration of the CHISLIC tool, details about the processing capabilities and limitations of the tool, and a discussion of the impacts of including lidar data sets on vegetation structure and canopy fuel products.

In the workshop we will address various topics including:

- Background to airborne and spaceborne lidar data
- Lidar data sources, archives, and providers
- System requirements for running CHISLIC
- CHISLIC data input requirements
- History of algorithms used to derive lidar-based products in CHISLIC
- Impact analysis of using standard LANDFIRE products compared to lidar-infused LANDFIRE products
- Limitations of CHISLIC
- CHISLIC webpage and other resources

Participants are encouraged to bring their own laptops and lidar data sets for hands-on exploration of CHISLIC during the workshop. If interested users do not have access to lidar data, sample data sets will be provided.

Length: 4 hours

Minimum Number: 5

Maximum Number: 20

Special Needs: Two tables

Costs: No additional cost