

**LANDFIRE Disturbance 1999 - 2012 Data Dictionary**

Attribute	Description	Enumerated Value	Enumerated Value Description	
<b>Value</b>	2-4 digit code representing the general category of the disturbance (combination of disturbance type and confidence information based on data sources), disturbance type, and severity.	11 - 1133	For example, 472 is identified by LANDFIRE Event, VCT, and dNBR data (4) associated with a wildfire (7) with a medium severity (2).	
<b>Count</b>	number of pixels for the corresponding value			
<b>Year</b>	Approximate (due to LANDFIRE Event year or image date timing issues) year in which the disturbance occurred.	1999 - 2014		
<b>Dist_Type</b>	Disturbance type (if identified by LANDFIRE Event perimeter data) or a best estimate of disturbance type based on LANDFIRE Event 500m buffers, PAD land management status, and/or Smartfire ignition point buffer (based on point accuracy) data.	Development	Conversion of natural lands into housing, commercial, or industrial building sites. Involves permanent land clearing.	
		Clearcut	The cutting of essentially all trees, producing a fully exposed microclimate for the development of a new age class.	
	Aconyms and/or Links: dNBR (differenced normalized burn ratio) <a href="http://www.mtbs.gov/methods.html">http://www.mtbs.gov/methods.html</a> (Monitoring Trends in Burn Severity) <a href="http://mtbs.gov/methods.html">http://mtbs.gov/methods.html</a> (Burned Area Reflectance Classification) <a href="http://www.fs.fed.us/eng/rsac/baer/barc.html">http://www.fs.fed.us/eng/rsac/baer/barc.html</a> (Rapid Assessment of Vegetation Condition after Wildfire) <a href="http://www.fs.fed.us/postfirevegcondition/whatis.shtml">http://www.fs.fed.us/postfirevegcondition/whatis.shtml</a> PAD (Protected Areas Database) <a href="http://gapanalysis.usgs.gov/padus/">http://gapanalysis.usgs.gov/padus/</a> (Vegetation Change Tracker) <a href="ftp://rescha.colorado.edu/pub/harvey/Gamblin/IDL_code/Huang_etal_2010.pdf">ftp://rescha.colorado.edu/pub/harvey/Gamblin/IDL_code/Huang_etal_2010.pdf</a> (Remotely Sensed Landscape Change) <a href="http://www.fs.fed.us/rm/pubs_other/rmrs_2011_vogelmann_j001.pdf">http://www.fs.fed.us/rm/pubs_other/rmrs_2011_vogelmann_j001.pdf</a> GAP (Gap Analysis Program)	MTBS	Harvest	A general term for the cutting, felling, and gathering of forest timber. The term harvest was assigned to events where there was not enough information available to call them one of the 2 distinct types, clearcut or thinning.
		BARC	Thinning	A tree removal practice that reduces tree density and competition between trees in a stand. Thinning concentrates growth on fewer, high-quality trees, provides periodic income, and generally enhances tree vigor.
		RAVG	Mastication	Means by which vegetation is mechanically "mowed" or "chipped" into small pieces and changed from a vertical to horizontal arrangement.
		VCT	Other Mechanical	Catch all term for a variety of forest and rangeland mechanical activities related to fuels reduction and site preparation including; piling of fuels, chaining, lop and scatter, thinning of fuels, Dixie harrow, etc.
		RSLC		

<http://gapanalysis.usgs.gov>  
 BLM (Bureau of Land Management)  
<http://www.blm.gov/wo/st/en.html>  
 (Multi-Index Integrated Change Analysis)  
 2013. A comprehensive change detection method for updating the National Land Cover Database to Circa 2011. Remote Sensing of Environment (in review).  
[http://www.getbluesky.org/smartfire/docs/SMARTFIRE\\_Algorithm\\_Description\\_Final.pdf](http://www.getbluesky.org/smartfire/docs/SMARTFIRE_Algorithm_Description_Final.pdf)

MIICA  
 Jin, S. et al.  
 SmartFire

Wildfire	An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to suppress or put out the fire.
Wildland Fire Use	The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in pre-defined designated areas outlined in Fire Management Plans.
Prescribed Fire	Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.
Wildland Fire	A catch all term used to describe any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined: wildfire, wildland fire use, and prescribed fire. The term wildland fire was assigned to events where there was not enough information available to call them one of the 3 distinct types.
Weather	Weather related event that results in loss of vegetation such as blowdown, hurricane, or tornado.
Insecticide	Application of a chemical substance used to kill insects.
Chemical	Application of a chemical substance. The term chemical was assigned to events where there was not enough information available to call them one of the 2 distinct types, herbicide or insecticide.
Insects	Infestations of unwanted insects that can affect vegetative health such as bark beetle.
Disease	Infestations of disease that can affect vegetative health such as root rot.
Insects/Disease	Infestations of insects and/or disease that can affect vegetative health. This term was assigned to events where there was not enough information available to call them one way or the other.
Herbicide	Application of a chemical substance used to kill or inhibit the growth of plants.

		Biological	The use of living organisms, such as predators, parasites, and pathogens, to control weeds, pest insects, or diseases.
		Wildfire	BLM defined fire. An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to suppress or put out the fire.
		Unknown	Sources indicate that a disturbance occurred but causality is uncertain.
<b>Severity</b>	Severity for MTBS(< <a href="http://mtbs.gov/methods.html">http://mtbs.gov/methods.html</a> >), BARC(< <a href="http://www.fs.fed.us/eng/rsac/baer/barc.html">http://www.fs.fed.us/eng/rsac/baer/barc.html</a> >), and RAVG(< <a href="http://www.fs.fed.us/postfirevegcondition/whatis.shtml">http://www.fs.fed.us/postfirevegcondition/whatis.shtml</a> >) fires are determined by each project's criteria. Other fire severity is determined by using mosaiced dNBR (difference Normalized Burn Ratio) data classified into high, medium, and low severity levels based on a statistical comparison with the MTBS, BARC, and RAVG fire severity. In 2010 and subsequent versions, severity is determined by statistical (standard deviation) breaks associated with individual path/row dNBR data.	Unburned/Low	General classification level associated with low or unburned landcover. Thresholds used are dependent on the project and can vary from fire to fire.
		Low	General classification level associated with low fire effect on land- cover. Thresholds used are dependent on the project and can vary from fire to fire.
		Medium	General classification level associated with medium fire effect on landcover. Thresholds used are dependent on the project and can vary from fire to fire.
		High	General classification level associated with high fire effect on land- cover. Thresholds used are dependent on the project and can vary from fire to fire.
		Increased Green	Post fire image indicated an increase in landcover greenness compared to fire image.
		NoData/Non processing mask	Areas not mapped by MTBS due to clouds, Landsat 7 SLC-Off issues (i.e. scan line dropouts), or other image issues.
<b>Confidence (Type and Severity)</b>	Confidence is evaluated based on the input data sources. For example, a mapped wildfire disturbance identified in the LANDFIRE Events database, VCT output, and dNBR data would have a higher confidence than a disturbance identified by VCT only since the causality and perimeter are unknown.	Low	General confidence in the mapped disturbance is low due to lack of information relative to assignment of causality and/or severity.
		Low to Medium	General confidence in the mapped disturbance ranges between low and medium due to lack of information relative to assignment of causality and/or severity.

	Medium	General confidence in the mapped disturbance is medium due to the availability of some information relative to assignment of causality and/or severity, but more information is warranted in order to have increased confidence.
	Medium to High	General confidence in the mapped disturbance ranges between medium and high due to the availability of some information relative to assignment of causality and/or severity, but more information is warranted in order to have increased confidence.
	High	General confidence in the mapped disturbance is high due to the availability of specific information relative to assignment of causality and/or severity.

<b>Source(1-4)</b>	A combination of one to four of the following: 1) Fire data source (MTBS, BAER, or RAVG), 2) LANDFIRE Event polygons, 3) MIICA or VCT raster output, 4) PAD GAP Status polygons, 5) dNBR (differenced NBR), 6) Burned Area Essential Climate Variable (BAECV)	
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<b>Description</b>	A synopsis of the data, and the reasoning behind their use, used to determine the classification.	
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<b>Red</b>	Red color value/255	0 -1	
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<b>Green</b>	Green color value/255	0-1	
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<b>Blue</b>	Blue color value/255	0-1	
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