

# Using LANDFIRE Products for FSC compliance

The Nature Conservancy's LANDFIRE team

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# Contents

<b>1</b>	<b>LANDFIRE and the Forest Stewardship Council US Standards</b>	<b>5</b>
<b>2</b>	<b>Software and Datasets</b>	<b>7</b>
<b>3</b>	<b>GIS prep</b>	<b>9</b>
<b>4</b>	<b>Methods</b>	<b>13</b>
<b>5</b>	<b>Applications</b>	<b>15</b>
5.1	Example one . . . . .	15
5.2	Example two . . . . .	15
<b>6</b>	<b>Final Words</b>	<b>17</b>



## Chapter 1

# **LANDFIRE and the Forest Stewardship Council US Standards**



## Chapter 2

# Software and Datasets

You will need these LANDFIRE products:

- Spatial datasets, clipped to your area(s) of interest
  - Biophysical Settings. This dataset will be used to get at “community habitat”, or where ecosystems could occur based on abiotic factors (e.g., soils, climate).
  - Succession classes characterizes structural classes on the landscape at the time the dataset represents (e.g., 2016 for LF Version 200).
  - Existing Vegetation Type maps NatureServe’s Ecological Systems (see descriptions here).
- Non-spatial products
  - Biophysical Settings Descriptions which has information on natural disturbance regimes and succession class descriptions (also available here)
  - Reference Condition Table supplements the BpS descriptions with the “reference” percentages for each succession class, for each Biophysical Settings.



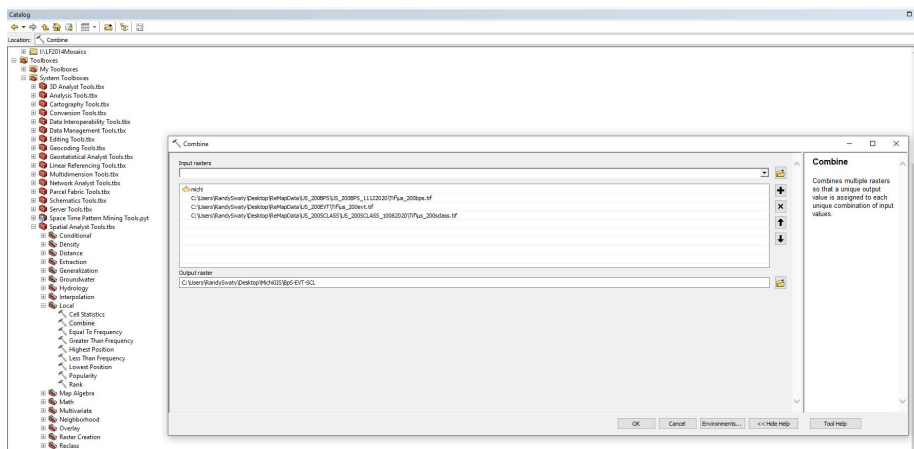


# Chapter 3

# GIS prep

### Methods:

1. Once spatial data is clipped to area of interest, perform a “combine” in ArcMap (Toolbox > Spatial Analyst > Local > Combine) of the BpS, SCL and EVT datasets. Alternatively, you can combine a raster of the area of interest with those 3 datasets which are stored as larger extents (like shown below).



2. Join in attributes. There are multiple ways-we recommend using the Join Field tool (Toolbox > data management tools > joins > add join). One reason to do this is to be able to select which fields to join in. A potential resulting table looks like this for a landscape in Michigan (with minimal cleaning/formatting):

Show 10 entries Search:

	VALUE	COUNT	BPS_NAME	BPS_MODEL	GROUPVEG	EVT_NAME	EVT_PHYS	LABEL
1	1	155604	Open Water	na	Open Water	Open Water	Open Water	Water
2	2	4217	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Northern & Central Raderal Meadow	Exotic Herbaceous	UE
3	3	6051	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian Jack Pine-Red Pine Forest	Conifer	UN
4	4	2285	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian Jack Pine-Red Pine Forest	Conifer	E
5	5	2971	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian- Acadian Pine- Hemlock Forest	Conifer	UN
6	6	5351	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian- Acadian Sub- boreal Mesic Balsam Fir-Spruce Forest	Conifer	UN

Showing 1 to 6 of 6 entries Previous 1 Next

As is this table does not mean too much-we will need to do some cleaning, formatting and calculating.

3. Clean data table (combined “.csv” file). You will first need to save this file as an “.xlsx” file so that you can have multiple worksheets. We recommend keeping the original output as a “raw” spreadsheet in Excel, pasting that data into a new sheet and working with that new sheet moving forward.

- It is OK to remove the “US\_200BPS”, “US\_200EVT”, and “US\_200SCLASS” columns
- Rename some columns: “GROUPVEG” to “BPSGROUPVEG”; “EVT\_PHYS” to “EVTGROUPVEG”; “LABEL” to “SUCCESSIONCLASS”, or similar as needed for clarity
- COUNT = number of 30m x 30m pixels for that combination of BpS-EVT-SCLS. Insert a column named “ACRES”, then calculate acres by multiplying COUNT by “0.222”. Copy-Paste Values for that new column. Below is an example of what our new data table looks like.

Show 

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 entries

Search:

	VALUE	COUNT	BPS_NAME	BPS_MODEL	GROUP/VEG	EVT_NAME	EVT_PHYS	LABEL
1	1	155604	Open Water	na	Open Water	Open Water	Open Water	Water
2	2	4217	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Northern & Central Ruderal Meadow	Exotic Herbaceous	UE
3	3	6051	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian Jack Pine-Red Pine Forest	Conifer	UN
4	4	2285	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian Jack Pine-Red Pine Forest	Conifer	E
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6	6	5351	Laurentian-Acadian Northern Hardwoods Forest - Hemlock	13022_41_50_51	Hardwood	Laurentian-Acadian Sub-boreal Mesic Balsam Fir-Spruce Forest	Conifer	UN

Showing 1 to 6 of 6 entries

Previous

1

Next



## Chapter 4

# Methods

We describe our methods in this chapter.



## Chapter 5

# Applications

Some *significant* applications are demonstrated in this chapter.

### 5.1 Example one

### 5.2 Example two





## Chapter 6

# Final Words

We have finished a nice book.