

**Tutorial F**

# **How to Use IFTDSS to Acquire and Edit Spatial LANDFIRE Data**

# Overview

This landscape-based tutorial covers

- How to upload or acquire LANDFIRE data.
  - Upload a landscape (.lcp) file and corresponding projection (.prj) file from your local machine
  - Acquire landscape data from LANDFIRE for a specified area of interest using map tools in IFTDSS.
- Editing LANDFIRE data in Data Studio.
  - Point edit – editing one pixel at a time.
  - Advanced edit – editing multiple pixels at once.
  - Polygon advanced edit – editing pixels within a user-drawn polygon.

# Navigating to the Data Tab

To manage your data sets in IFTDSS, navigate to the Data tab.

Choose **Manage My Data Sets** on the Home page, or access the **Data** tab.

The screenshot shows the IFTDSS 2.0 beta interface. At the top, there is a navigation bar with four tabs: Home, Collaborate, Projects, and Data. The Data tab is highlighted with a pink border. Below the navigation bar, there is a section titled "Actions" with several items:

- Create a New Project
- Manage My Projects
- Manage My Data Sets** (This item is highlighted with a pink border)
- View Published Projects
- Find Other Users
- Instructions, Tutorials, & Videos
- What's New

# Introducing the Data Tab

From the **All Data** tab, you can do the following:

- View all saved data sets.
- Sort data sets by name, project, data type, date created, date modified, or status.
- Use the Actions dropdown to edit, copy , rename, or delete existing data sets.
- Search for data sets.
- Filter the view of data sets by project name or data type.
- Select how many data sets you wish to view per page.

From the **Data** tab, select the **LANDFIRE/LCP Data** tab.

All data sets containing LANDFIRE data can be viewed and edited on this tab.

Data Set Name	Project Name	Data Type	Date Created	Date Modified	Status	Actions
Olompali Risk-Run 1...	Risk Assessment - Ol...	IFT-LANDFIRE LCP	01/06/2014	01/06/2014	Ready	[Edit]
South Lake Tahoe HA		IFT-LANDFIRE LCP	01/03/2014	01/03/2014	Ready	[Edit]
Red Bull Unit		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	[Edit]
Tecuya Project Area		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	[Edit]
Olompali State Histo...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	[Edit]
Olompali Fuels Treat...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	[Edit]
Olompali Risk-Run 1 ...			07/25/2013	07/25/2013	Ready	[Edit]
Olompali Risk-Run 1 ...		Values at Risk	07/25/2013	07/25/2013	Ready	[Edit]
Olompali VAR		Polygons, Values at Risk	07/25/2013	07/25/2013	Ready	[Edit]
South Lake Tahoe		IFT-LANDFIRE LCP	06/24/2013	06/24/2013	Ready	[Edit]

# Uploading a Landscape (.LCP) File into IFTDSS

From the **LANDFIRE/LCP Data** tab, there are two options for loading .lcp files into IFTDSS:

- Option 1. **Upload a Landscape (.LCP) File** and corresponding projection (.prj) file from your local machine.
- Option 2. **Acquire Landscape Data from LANDFIRE** for a specified area of interest using map tools in IFTDSS. The corresponding .lcp data will be retrieved and loaded into IFTDSS.

## Option 1: Upload a Landscape (.LCP) File

To create a data set, you can upload a LANDFIRE landscape file (an .lcp file and accompanying .prj file) from your local computer.

To upload a data set, Choose **Upload Landscape (.LCP) File**.

This opens the **Upload New Data Set** page.

Data Set Name	Project Name	Data Type	Date Created	Date Modified	Status	Actions
.South Lake Tahoe HA		IFT-LANDFIRE LCP	01/03/2014	01/03/2014	Ready	
Red Bull Unit		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	
Tecuya Project Area		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	
Olompali State Histo...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	
Olompali Fuels Treat...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	
South Lake Tahoe		IFT-LANDFIRE LCP	06/24/2013	06/24/2013	Ready	

# Uploading a Landscape (.LCP) File into IFTDSS

On the **Upload New Data Set** page, enter a name for your data set. This name will later be displayed on the **Saved Data Sets** page.

Add a file by choosing **Choose File** under **Uploaded Files**. Browse on your local computer for the file (in .lcp format).

Once you have found the desired file, choose **Add File**.

Repeat the previous steps to add the corresponding .prj file (each .lcp file also needs a corresponding .prj file).

Once you have selected all the files you want to upload, choose **Finish** to upload the files.

**Note:** The file upload size is limited to 24 MB.

The screenshot shows the 'Upload New Data Set' page with the following details:

- Instructions:** To upload your data:
  - 1) Give the data set a name.
  - 2) Choose a file from your computer that you would like to upload.
  - 3) Click Add File.
  - 4) Repeat for any additional files.
  - 5) Click Finish.
- Data Set:** (Required) Enter a name for this new data set. The input field contains "Pioneer Landscape LCP".
- Uploaded Files:** Shows two files listed with red X icons:
  - Landscape\_1.lcp
  - Landscape\_1.prj
- Add File:** Contains a 'Choose File' button with the text "No file chosen" and an 'Add File' button.
- Buttons:** At the bottom are "Cancel" and "Finish" buttons.

# Acquiring Landscape Data from LANDFIRE Using IFTDSS

After you have uploaded your file(s), your new data set will be listed on the **Saved Data Sets** page under the LANDFIRE/LCP Data tab and the **All Data** tab. All uploaded .lcp data sets will be tagged with the data type “Uploaded LCP.”

Note: Because you created the data set directly and not as part of a project, there is no project associated with the data set.

Next, we will acquire spatial LANDFIRE data using IFTDSS.

From the LANDFIRE/LCP Data tab, select **Acquire Landscape Data from LANDFIRE**.

• Data set 'Pioneer Landscape LCP' was successfully uploaded.

Help

Saved Data Sets

All Data LANDFIRE/LCP Data Fuelbed Data

Upload a Landscape (.LCP) File Acquire Landscape Data from LANDFIRE

Show 10 entries Search:

Data Set Name	Project Name	Data Type	Date Created	Date Modified	Status	Actions
Pioneer Landscape LC...		Uploaded LCP	01/07/2014	01/07/2014	Ready	
.South Lake Tahoe HA		IFT-LANDFIRE LCP	01/03/2014	01/03/2014	Ready	
Red Bull Unit		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	
Tecuya Project Area		IFT-LANDFIRE LCP	09/17/2013	09/17/2013	Ready	
Olompali State Histo...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	
Olompali Fuels Treat...		IFT-LANDFIRE LCP	09/03/2013	09/03/2013	Ready	
South Lake Tahoe		IFT-LANDFIRE LCP	06/24/2013	06/24/2013	Ready	

Filters: (all) (all) (all)

Showing 1 to 7 of 7 entries (filtered from 11 total entries) First Previous 1 Next Last

# Acquiring Landscape Data from LANDFIRE using IFTDSS

This link takes you to the **Acquire Data from LANDFIRE** page, where you will

- Name your data set
- Choose a [LANDFIRE data layer](#)
- Select a fuel model type ([Scott and Burgan 40](#) or [Anderson 13](#))

The next page shows you how to select an area of interest for your project using the map window.

**Acquire Data from LANDFIRE**

**Data Set Name**  
Olompali State Historic Park

**LANDFIRE Data Layer**  
LANDFIRE 2008 (v 1.10)

**Fuel Model**  
Scott and Burgan 40

**North** 50.00398785598  
**West** -127.9687500178  
**East** -70.31250000979  
**South** 29.759310746807

Define the area for your LANDFIRE data set by using the Draw Box tool to select an area on the map below or by using the latitude and longitude coordinate boxes to the left.

Navigate Map  Draw Box

Selected area: 2,916,820,563.86 acres

Base Layer  
 Imagery  
 Topo Map  
 Street Map

1000 km  
500 mi

Back Acquire

# Acquiring Landscape Data from LANDFIRE Using IFTDSS

To set your area of interest, use one of these three options:

A Select the **Navigate Map** button above the map, then use the navigation tools located in the top left portion of the map. After navigating to your area of interest, select **Draw Box** to manually draw your area of interest on the map.

B Select the **Navigate Map** button above the map, then use the mouse. Click and drag to move; double-click to zoom in. After navigating to your area of interest, select **Draw Box** to manually draw your area of interest on the map.

C Enter the geographic coordinate extents of your area of interest using the coordinate entry boxes.

Once you have defined your area of interest, choose **Acquire**.

**Acquire Data from LANDFIRE**

Data Set Name: Olompali State Historic Park  
LANDFIRE Data Layer: LANDFIRE 2008 (v 1.10)  
Fuel Model: Scott and Burgan 40

North: 38.156466540076  
West: -122.6020759038  
East: -122.5521224431  
South: 38.121092708891

Selected area: 4,282.64 acres

Base Layer: Imagery, Topo Map, Street Map

**A** Navigate Map **B** Draw Box

Back **Acquire**

Define the area for your LANDFIRE data set by using the Draw Box tool to select an area on the map below or by using the latitude and longitude coordinate boxes to the left.

# Acquiring Landscape Data from LANDFIRE Using IFTDSS

After your data set has been successfully acquired, you are returned to the **Saved Data Sets** page on the **LANDFIRE/LCP Data** tab, where a message confirms that IFTDSS has successfully acquired your data. Your new data set is in the list of available data sets. All LANDFIRE data sets acquired through IFTDSS will be tagged with the data set type “IFT-LANDFIRE LCP.”

Note: Because you created the data set directly and not as part of a project, there is no project associated with the data set.

Next, we will edit LANDFIRE data using Data Studio.

The screenshot shows the 'Saved Data Sets' page on the 'LANDFIRE/LCP Data' tab. A green success message at the top states: 'Data set 'Olompali State Historic Park' was successfully acquired from LANDFIRE.' Below the message is a table listing eight data sets. The first data set, 'Olompali State Histo...', is highlighted with a pink border. The table columns are: Data Set Name, Project Name, Data Type, Date Created, Date Modified, Status, and Actions. The data rows are:

Data Set Name	Project Name	Data Type	Date Created	Date Modified	Status	Actions
Olompali State Histo...		IFT-LANDFIRE LCP	01/17/2013	01/17/2013	Ready	[gear icon]
Red Bull Unit	Red Bull	IFT-LANDFIRE LCP	01/06/2013	01/06/2013	Ready	[gear icon]
Tecuya Project Area	Tecuya Burn Unit	IFT-LANDFIRE LCP	01/05/2013	01/05/2013	Ready	[gear icon]
South Lake Tahoe.	Landscape Hazard Ana...	IFT-LANDFIRE LCP	01/03/2013	01/03/2013	Ready	[gear icon]
South Lake Tahoe	Landscape Hazard Ana...	IFT-LANDFIRE LCP	01/03/2013	01/03/2013	Ready	[gear icon]
Mendicino NF		IFT-LANDFIRE LCP	12/31/2012	12/31/2012	Ready	[gear icon]
Mendicino NF (copy)	Wolf Creek	IFT-LANDFIRE LCP	12/31/2012	12/31/2012	Ready	[gear icon]
West Petaluma	IFTDSS Portland Work...	IFT-LANDFIRE LCP	12/02/2012	12/02/2012	Ready	[gear icon]

At the bottom of the page, there are filters for 'Data Set Name' and 'Status', both currently set to '(all)'. The footer shows 'Showing 1 to 8 of 8 entries (filtered from 12 total entries)' and navigation links for 'First', 'Previous', '1', 'Next', and 'Last'.

# Opening Data Studio in IFTDSS

From the data set you would like to edit, click on the **Actions** dropdown and select **Edit**.

Data Studio opens in a new window.

**Important:** Because Data Studio opens in a new browser window, you'll need to disable pop-up blockers.

Saved Data Sets							
All Data	LANDFIRE/LCP Data	Fuelbed Data	Treelist Data				
				Upload a Landscape (.LCP) File	Acquire Landscape Data from LANDFIRE		
Show	10	entries					Search:
Data Set Name	Project Name	Data Type	Date Created	Date Modified	Status	Actions	
Olompali State Histo...		IFT-LANDFIRE LCP	01/17/2013	01/17/2013	Ready	 Edit	 Copy
Red Bull Unit	Red Bull	IFT-LANDFIRE LCP	01/06/2013	01/06/2013	Ready	 Edit	 Rename
Tecuya Project Area	Tecuya Burn Unit	IFT-LANDFIRE LCP	01/05/2013	01/05/2013	Ready	 Edit	 Delete
South Lake Tahoe.	Landscape Hazard Ana...	IFT-LANDFIRE LCP	01/03/2013	01/03/2013	Ready	 Edit	
South Lake Tahoe	Landscape Hazard Ana...	IFT-LANDFIRE LCP	01/03/2013	01/03/2013	Ready	 Edit	
Mendicino NF		IFT-LANDFIRE LCP	12/31/2012	12/31/2012	Ready	 Edit	
Mendicino NF (copy)	Wolf Creek	IFT-LANDFIRE LCP	12/31/2012	12/31/2012	Ready	 Edit	
West Petaluma	IFTDSS Portland Work...	IFT-LANDFIRE LCP	12/02/2012	12/02/2012	Ready	 Edit	
Filters:		(all)	(all)	(all)			
Showing 1 to 8 of 8 entries (filtered from 12 total entries)							
		First	Previous	1	Next	Last	

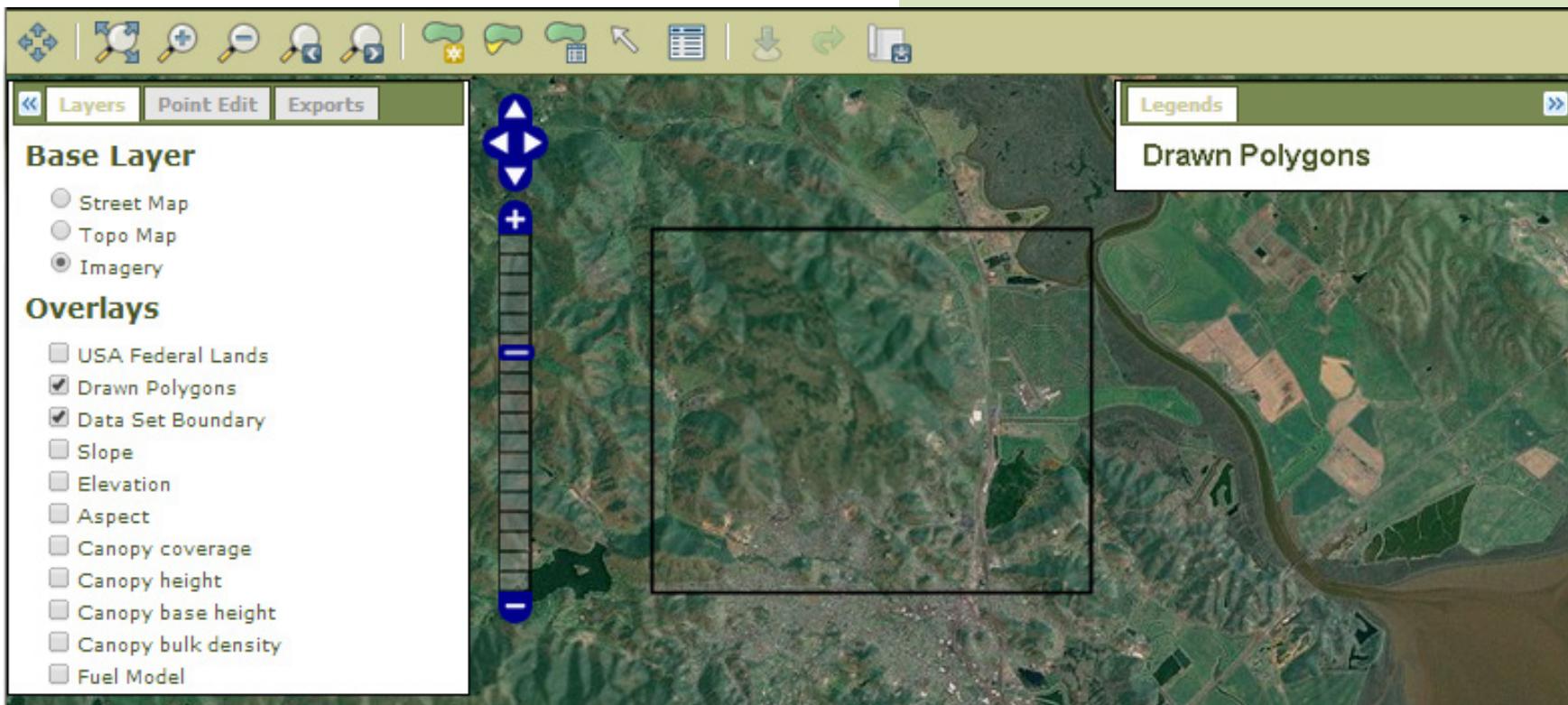
# Introducing the Map Toolbar

- Pan
- Zoom to initial extent
- Zoom in
- Zoom out
- Go back to previous pan/zoom
- Go forward to next pan/zoom
- Draw polygon
- Modify polygon
- Polygon advanced edit
- Point edit
- Advanced edit
- Save All
- Revert
- Save map image

Now, you are in Data Studio.

The map toolbar, located at the top of the map, provides tools for viewing and editing data.

Hover your cursor over each tool for a brief description of that tool.



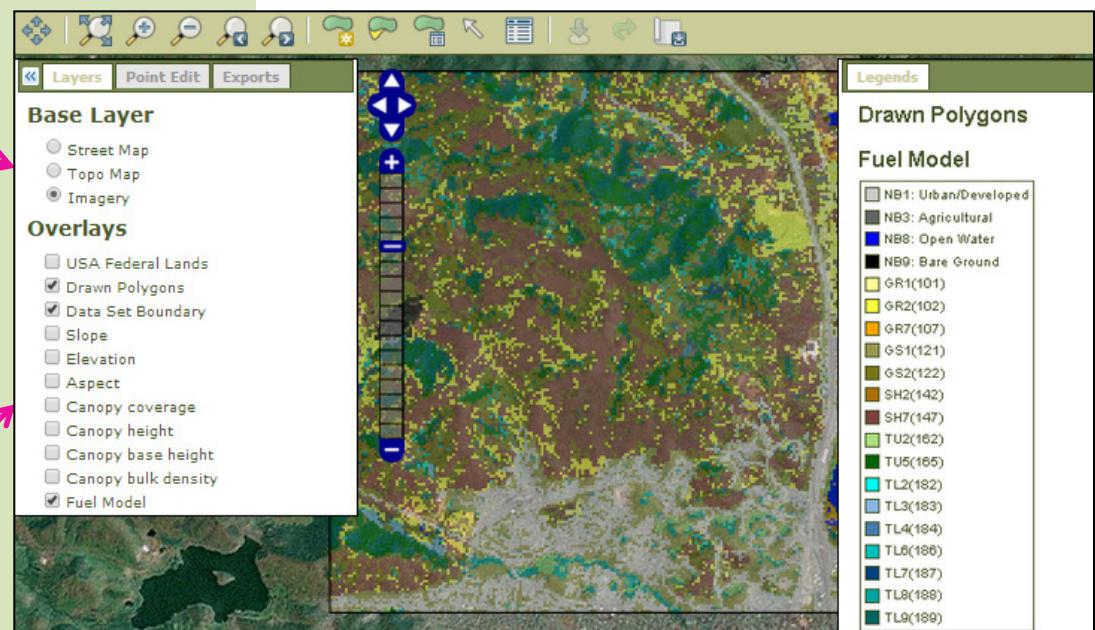
# Reviewing Spatial Landscape Data

You can view the spatial area using different base layers.

- Imagery
- Topo map
- Street map

You can view your spatial landscape data by the following LANDFIRE data layers:

- USA Federal Lands polygons
- Elevation
- Slope
- Aspect
- Canopy Coverage
- Canopy Height
- Canopy Base Height
- Canopy Bulk Density
- Fuel Model



# Editing Spatial Landscape Data (One Pixel at a Time)

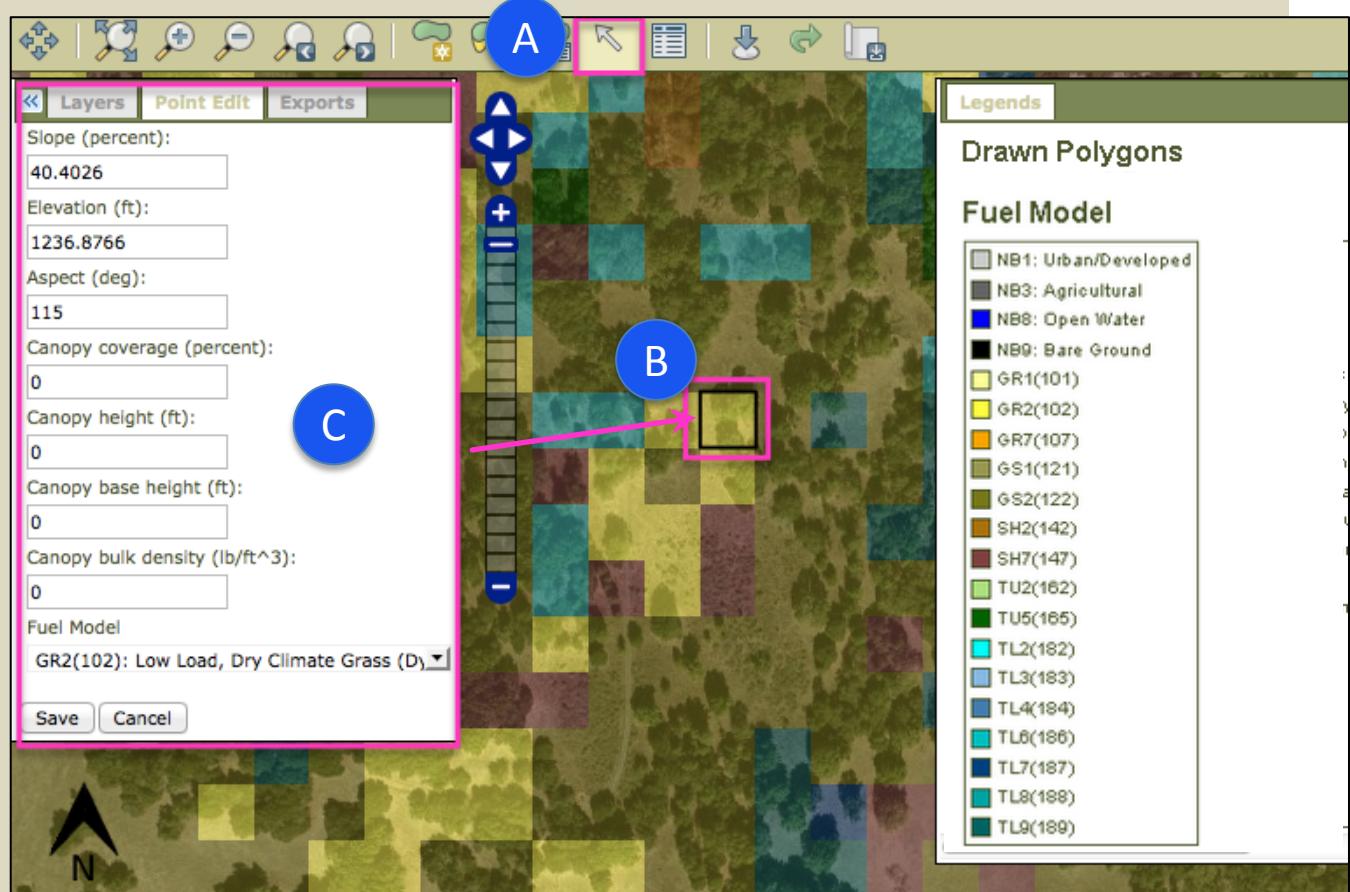
If you need to edit the spatial landscape data, you can use three editing tools on the map toolbar.

- **Point Edit:** edit one pixel at a time
- **Advanced Edit:** edit pixels across the entire run area.
- **Polygon Advanced Edit:** edit pixels within a user-drawn polygon

To edit one pixel at a time:

- Select the **Point Edit** tool.  

- Click on the pixel you would like to edit, and the **Point Edit** panel appears.
- Edit the pixel data and choose **Save**.



The next page shows how to edit the spatial landscape data using the **Advanced Edit** tool.

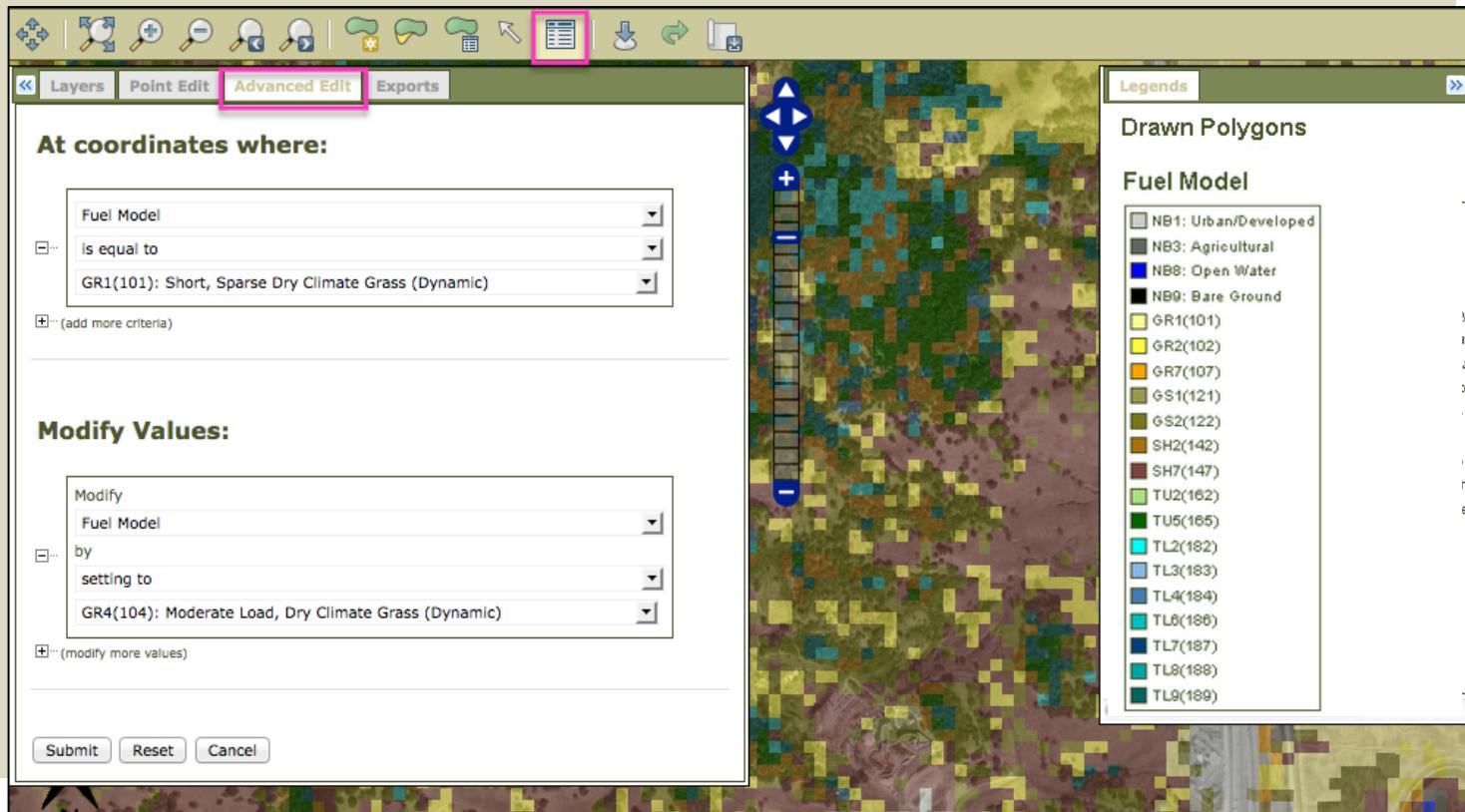
# Editing Spatial Landscape Data (Multiple Pixels across the Run Area)

In the previous example, we showed how to edit pixels one at a time. You can also use the **Advanced Edit** tool to edit multiple pixels at once.

To get started, select the **Advanced Edit** tool.  The **Advanced Edit** panel appears.

In this panel, you can modify any of the spatial data in query format so that multiple pixels can be changed at once.

Next, you will learn how to edit pixels using the **Advanced Edit** tool.



# Editing Spatial Landscape Data (Multiple Pixels within a Polygon)

In the next few steps, you will draw polygons and edit LANDFIRE data within the polygons.

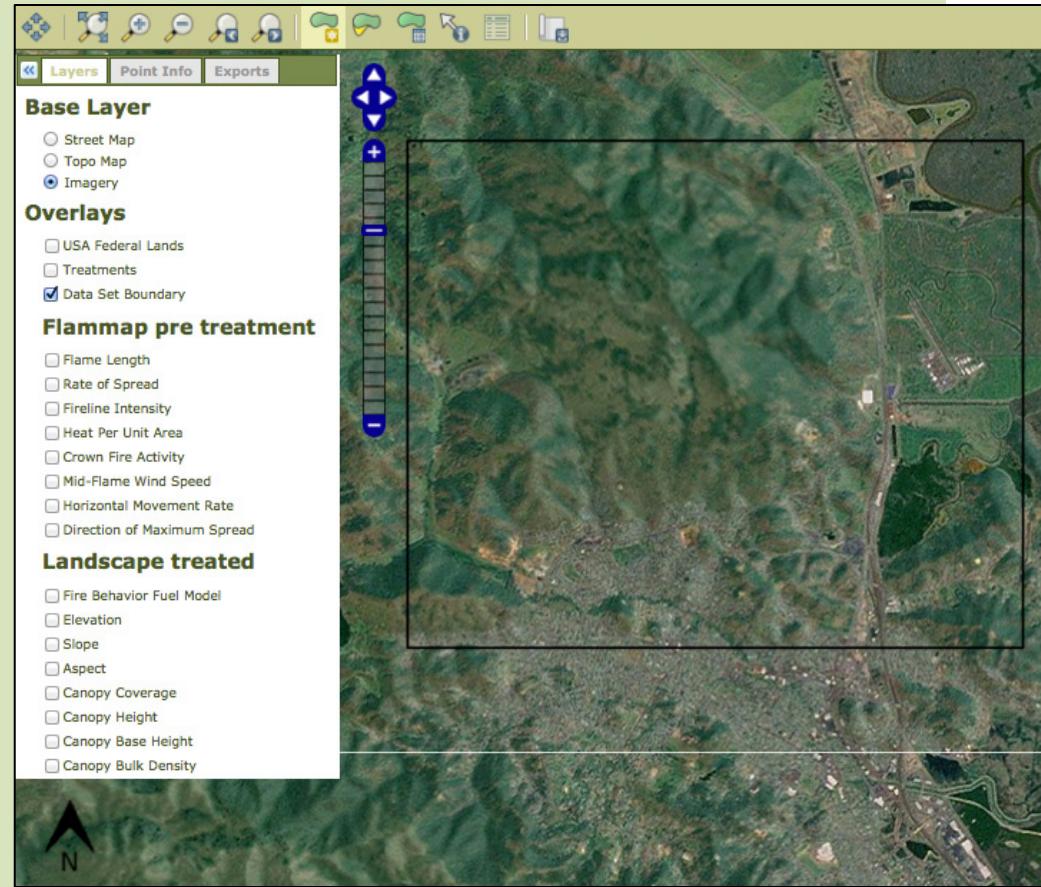
**There are two methods for using the map tools to draw polygons.**

1. The **freeform drawing method** is useful when

- You want to quickly and easily draw polygons.
- You have a small area of interest.
- You can see the entire area your polygon will encompass without moving the map.

2. The **point and click method** is useful when

- You want to zoom in to make a detailed polygon.
- You need to move the map (using the pan tool) while you are drawing a polygon.



These polygon drawing methods are discussed on pages 17 through 24.

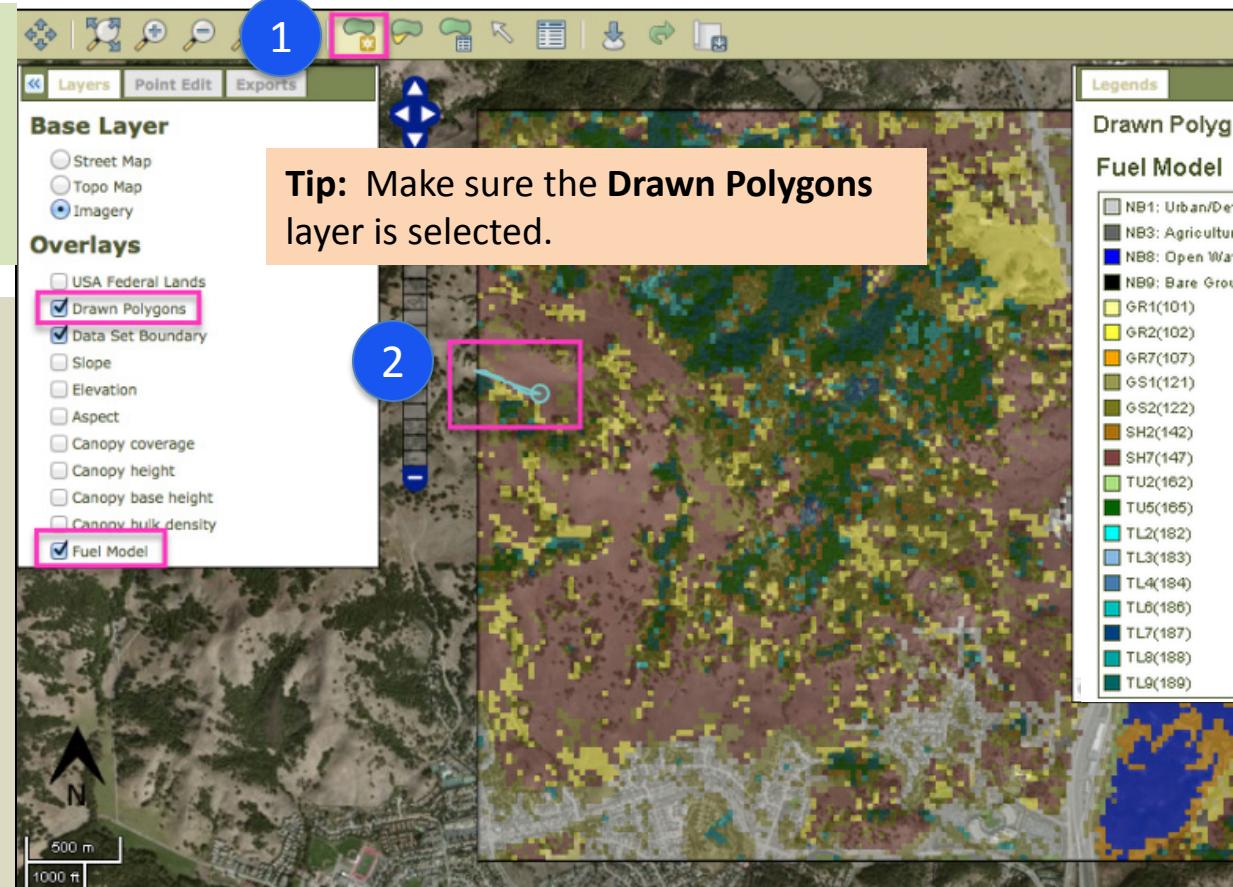
# Editing Spatial Landscape Data – Freeform Drawing Method

In this step, you use the freeform drawing method to outline an area within your landscape that you would like to edit.

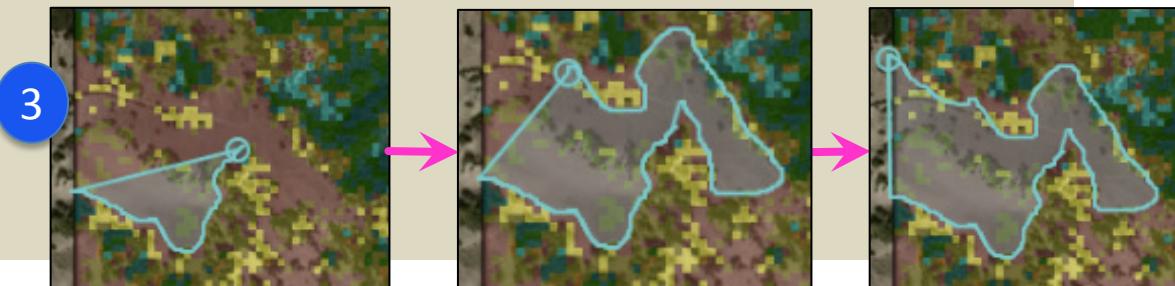
1 Select the **Draw Polygon** tool.

2 While holding down the **Shift** key, click on the map, hold down the left mouse button and start drawing your first polygon.

3 Continue to hold down the shift key and left mouse button. Moving the mouse as if it were a pencil, draw your polygon.



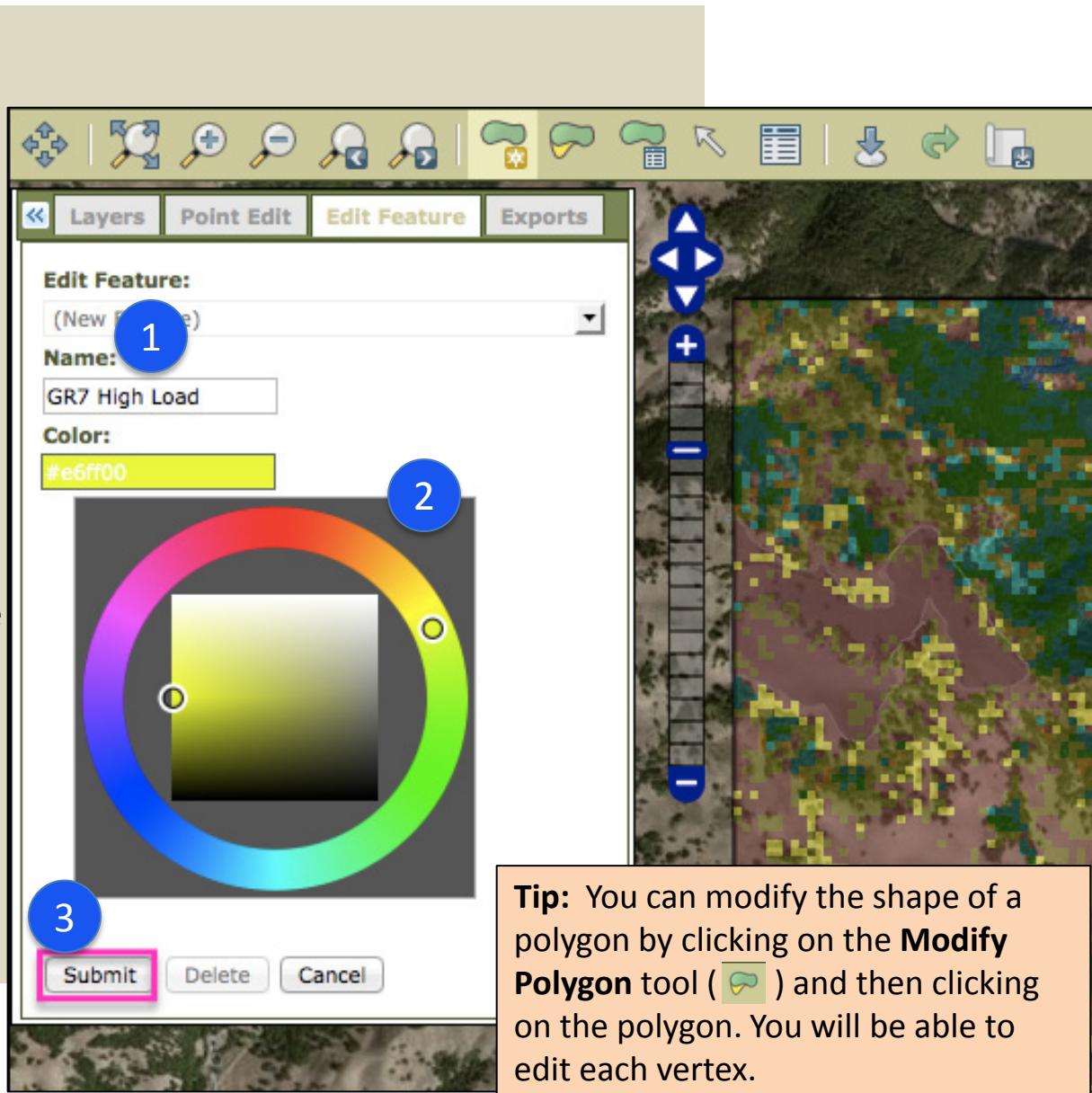
**Let go of the left mouse button when you are done drawing the polygon.** This creates the polygon and opens the **Edit Feature** panel (shown on the next page).



# Using the Edit Feature Panel to Define a Polygon

After you create the polygon, the **Edit Feature** panel appears. To define the polygon,

- 1 Name the polygon. We name ours GR7 High Load.
- 2 Give the polygon a color.
  - Click on the **Color** text box. A color wheel appears.
  - Use the color wheel to choose a color.
  - Use the inner box to choose the shade of the color selected.
- 3 Choose **Submit** to save the polygon data.



# Editing Spatial Landscape Data – Point and Click Method

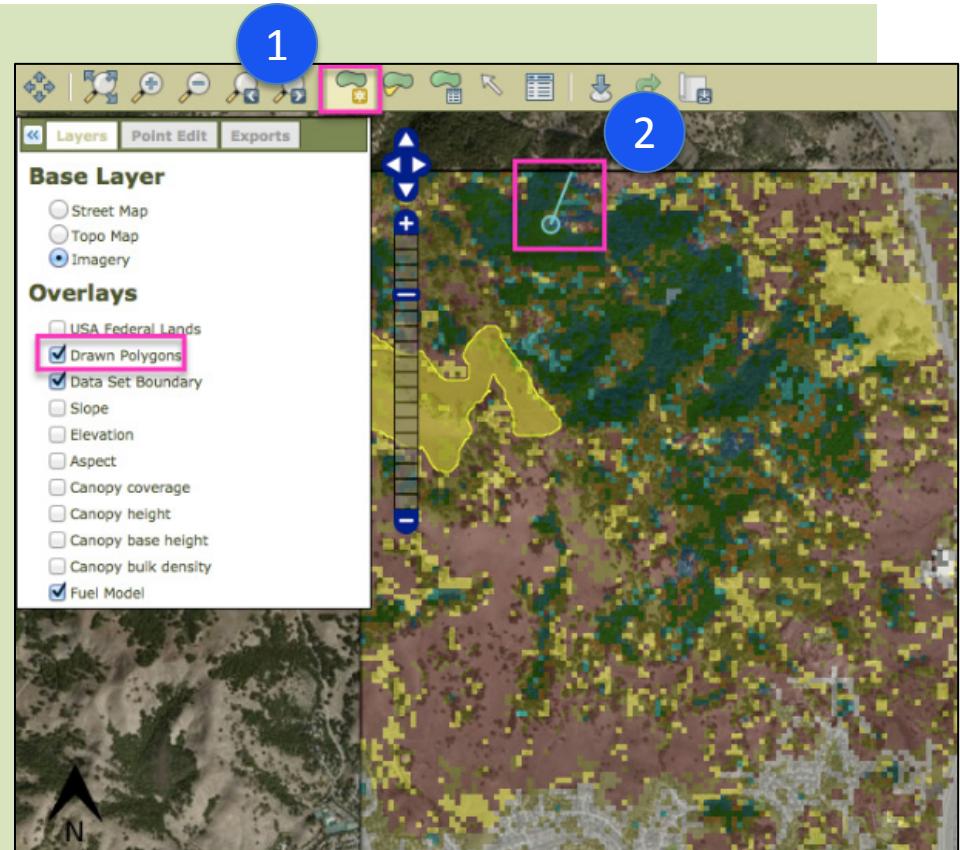
Next, define another polygon using the **point and click method**.

1 Select the **Draw Polygon** tool.

2 Click on the map and release to start drawing your first polygon.

3 Move the mouse to a new point and click to add another point. Before moving on, make sure the point is established (by moving the mouse away from the point). Continue this process until you are done drawing your polygon.

**Double-click when you are done drawing the polygon** to create the polygon and to open the **Edit Feature** panel (shown on the next page).

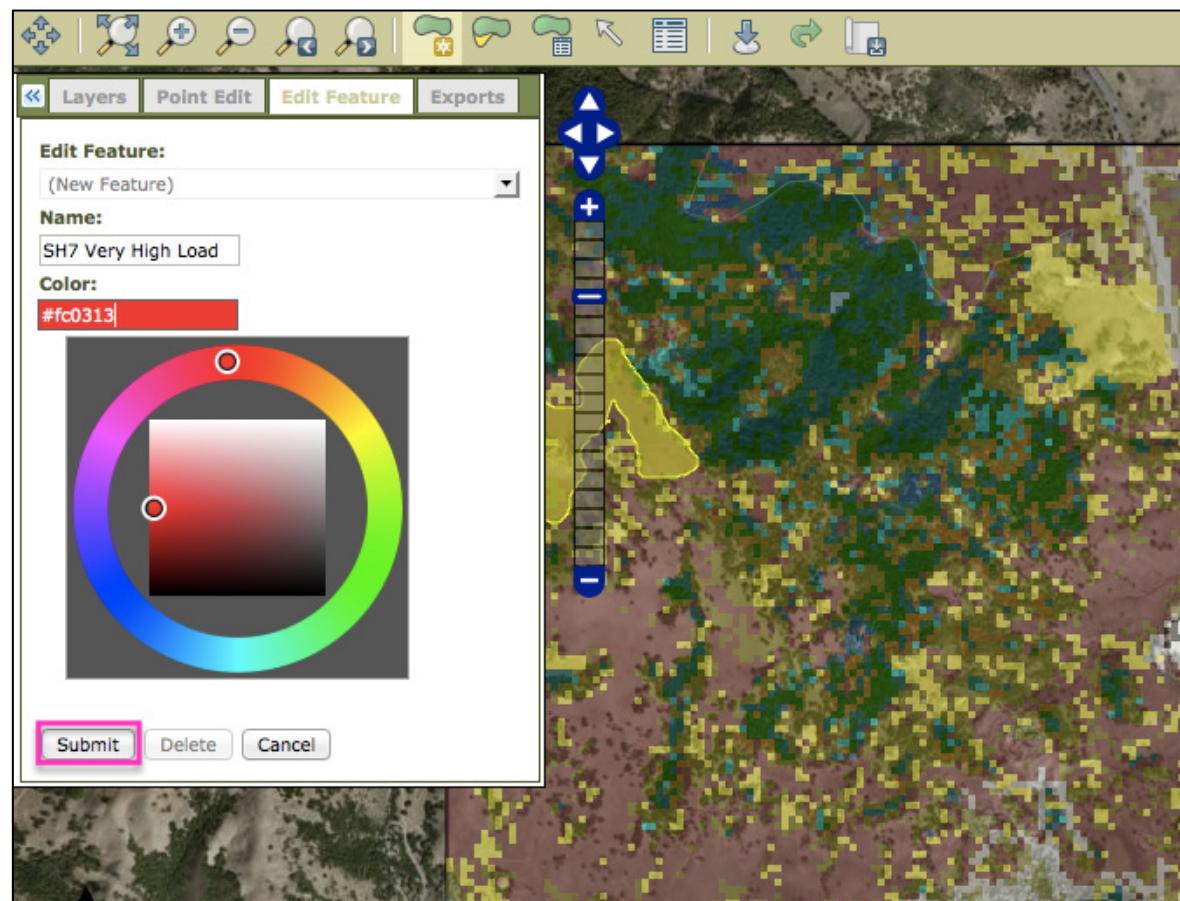


# Using the Edit Feature Panel to Define a Polygon

After you double-click to create the polygon, the **Edit Feature** panel appears. To define the polygon,

1. Name the polygon. We name ours SH7 Very High Load.
2. Give the polygon a color.
  - Click on the **Color** text box. A color wheel appears.
  - Use the color wheel to choose a color.
  - Use the inner box to choose the shade of the color selected.
3. Choose **Submit** to save the polygon data.

Next, we will edit the landscape data within these polygons.



# Editing LANDFIRE Data within a Polygon

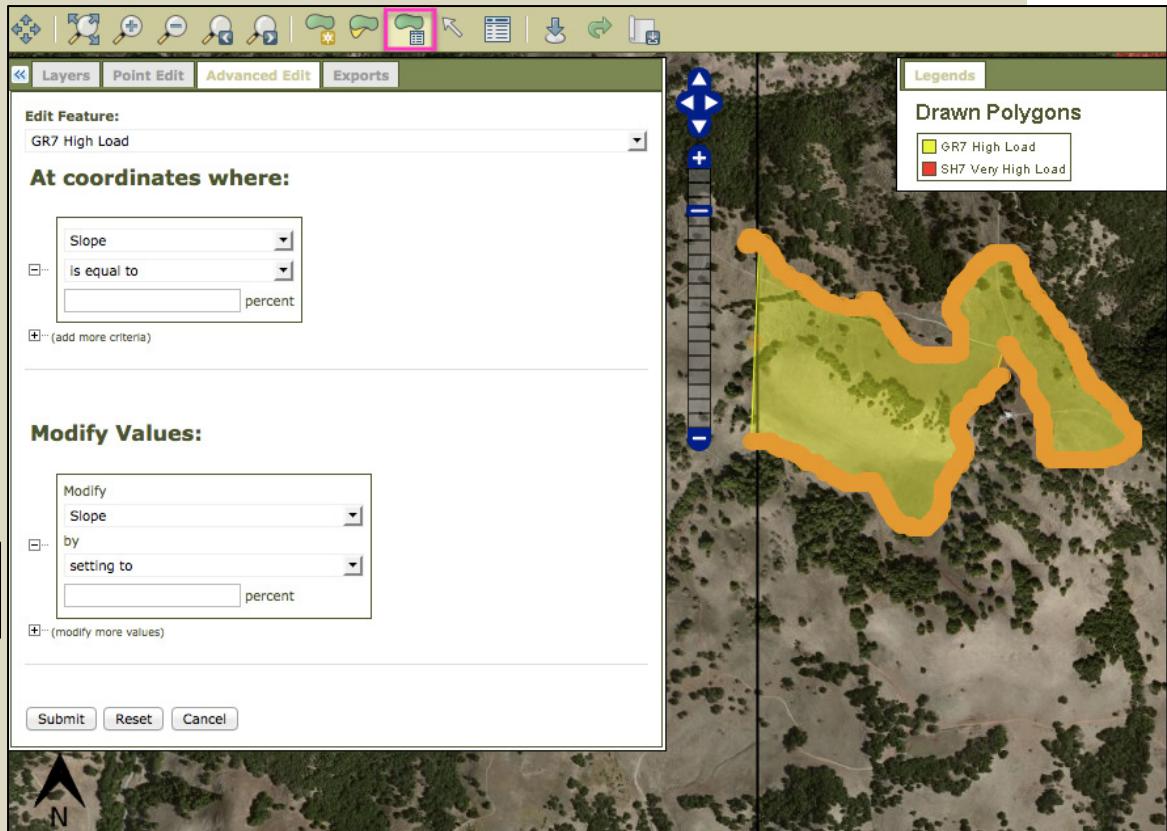
Now that we have created two polygons, the next step is to manually edit the landscape (LANDFIRE) data within these polygons.

Within the polygons, you can edit:

- Fire behavior fuel model
- Canopy coverage
- Canopy height
- Canopy base height
- Canopy bulk density
- Slope
- Aspect
- Elevation

Select the **Polygon Advanced** tool, and click on the GR7 High Load polygon.

The **Advanced Edit** panel appears (discussed on next page).



# Editing Spatial Landscape Data (Multiple Pixels Within a Polygon)

You can modify the landscape data within a polygon using the **Advanced Edit** panel.

The **Advanced Edit** panel edits the pixels within the selected polygon using a query format. In this example, we will modify all pixels within the polygon that are assigned the fuel model SH7(147): Very High Load, Dry Climate Shrub and assign them the fuel model GR7(107): High Load, Dry Climate Grass (Dynamic).

Choose **Submit** to make edits to the polygon.

The screenshot shows the 'Advanced Edit' tab selected in the top navigation bar. The 'Edit Feature:' field contains 'GR7 High Load'. The 'At coordinates where:' section contains a query: 'Fuel Model Is equal to SH7(147): Very High Load, Dry Climate Shrub'. Below it is a link '+ ... (add more criteria)'. The 'Modify Values:' section contains a modification: 'Modify Fuel Model by setting to GR7(107): High Load, Dry Climate Grass (Dynamic)'. Below it is a link '+ ... (modify more values)'. At the bottom are 'Submit', 'Reset', and 'Cancel' buttons, with 'Submit' highlighted with a pink border.

Layers Point Edit Advanced Edit Exports

Edit Feature:  
GR7 High Load

At coordinates where:

Fuel Model  
Is equal to  
SH7(147): Very High Load, Dry Climate Shrub

+ ... (add more criteria)

Modify Values:

Modify  
Fuel Model  
by  
setting to  
GR7(107): High Load, Dry Climate Grass (Dynamic)

+ ... (modify more values)

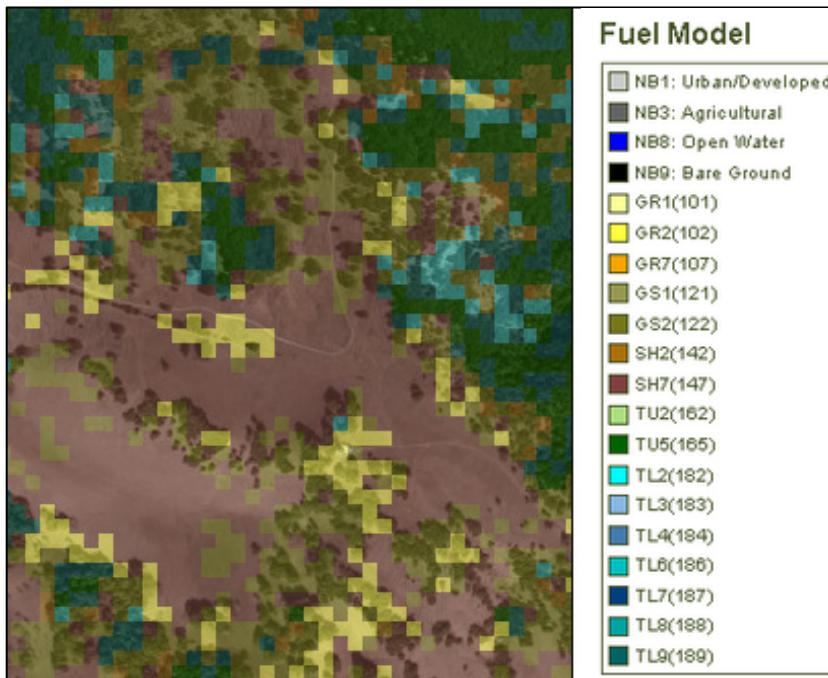
Submit Reset Cancel

# Editing Spatial Landscape Data (Multiple Pixels Within a Polygon)

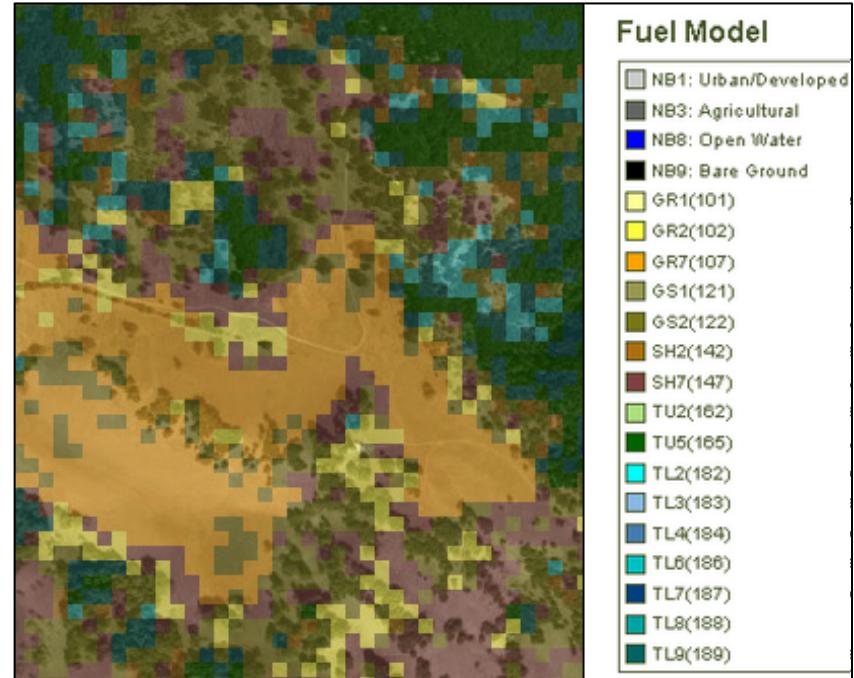
After you choose **Submit**, your edits to the landscape data are made to your polygon.

Next, we will edit landscape data within the other polygon.

Before Edits



After Edits



# Editing Spatial Landscape Data (Multiple Pixels Within a Polygon)

Next, we will modify the SH7 Very High Load polygon.

On the **Advanced Edit** panel, under the **Edit Feature** dropdown, select SH7 Very High Load.

For this polygon edit, we want to apply our edits to all pixels within the polygon. To do this, click on the minus sign () to the left of the “At coordinates where” box.

Now, the modifications will be applied to the entire polygon. For this polygon edit, change the fire behavior fuel model to SH7(147): Very High Load, Dry Climate Shrub.

Choose **Submit**.



The screenshot shows two side-by-side "Advanced Edit" dialog boxes from a GIS application. Both dialogs have a green header bar with "Layers", "Point Edit", "Advanced Edit" (which is selected), and "Exports".

**Left Dialog (Initial State):**

- Edit Feature:** SH7 Very High Load (highlighted with a pink box).
- At coordinates where:** A dropdown menu with "Slope" selected, "is equal to", and an empty input field.
- Modify Values:** A dropdown menu with "Slope" selected, "by setting to", and an empty input field.
- Buttons:** Submit, Reset, Cancel.

A pink arrow points from the text in the main content area to the minus sign () in the "At coordinates where" dropdown.

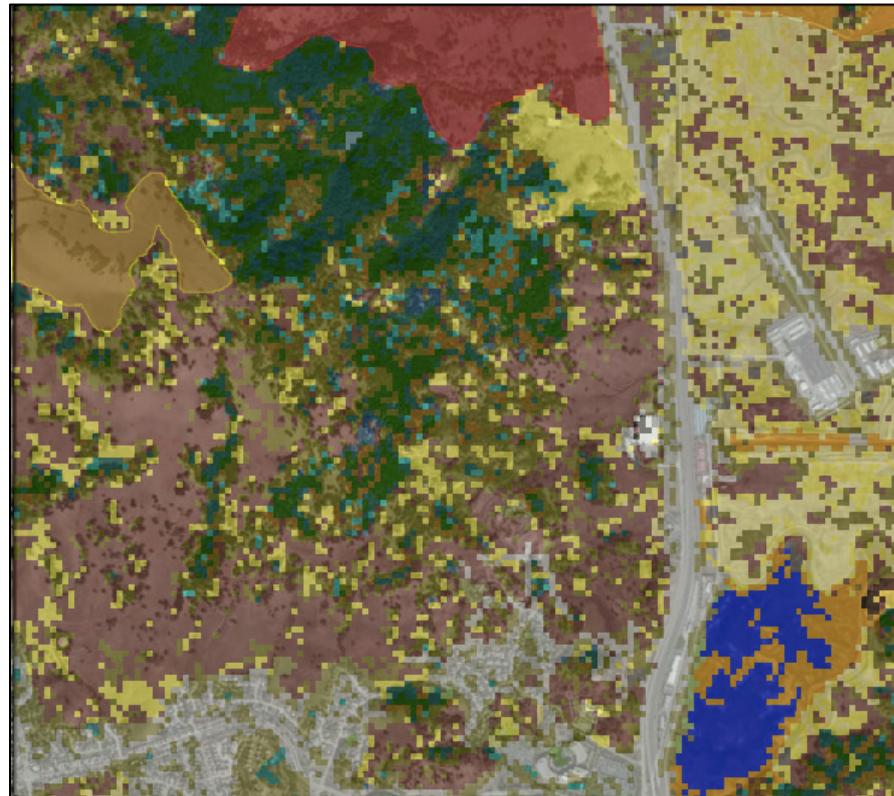
**Right Dialog (After Modification):**

- Edit Feature:** SH7 Very High Load.
- At coordinates where:** A note states "(Modifications will be applied to the entire data set.)".
- Modify Values:** The dropdown menu now shows "Fuel Model" selected, "by setting to", and "SH7(147): Very High Load, Dry Climate Shrub".
- Buttons:** Submit (highlighted with a pink box), Reset, Cancel.

# Review

In this tutorial, we were able to

- Upload or acquire LANDFIRE data.
  - Upload a landscape (.lcp) file and corresponding projection (.prj) file from your local machine.
  - Acquire landscape data from LANDFIRE for a specified area of interest using map tools in IFTDSS.
- Edit LANDFIRE data in Data Studio.
  - Point edit – editing one pixel at a time.
  - Advanced edit – editing multiple pixels at once.
  - Polygon advanced edit – editing pixels within a user-drawn polygon.



# Additional Help

The screenshot shows the IFTDSS 2.0 beta interface. At the top, there is a navigation bar with links for Home, Collaborate, Projects, and Data. On the right side of the bar, there are links for About, Help, Feedback, and Log Out. The Help link is highlighted with a pink rectangle and a circled number 1 above it. Below the navigation bar, it says "Logged in as Lorentz, Kimberly".

To navigate to additional tutorials in the IFTDSS online help content,

- 1 Click the **Help** button.
- 2 Then select **Getting Started (Tutorials and Videos)** from the side menu.

On that page, you'll find links to tutorials and videos on such topics as hazard analysis, prescribed burn planning, fuels treatment, spatial analysis across a landscape, and many more.

The screenshot shows a sidebar menu with the following items:

- Interagency Fuels Treatment Decision Support System
- Getting Started (Tutorials and Videos)** (highlighted with a pink rectangle and circled number 2)
- Concepts
- Hazard Analysis
- Prescribed Burn Planning
- Risk Assessment
- Fire and Fuels Application (FFA) Tools
- Reference Material
- IFTDSS Compared with Other Systems