

# The Interagency Fuels Treatment Decision Support System (IFTDSS): Facilitating Fuels Planning for All



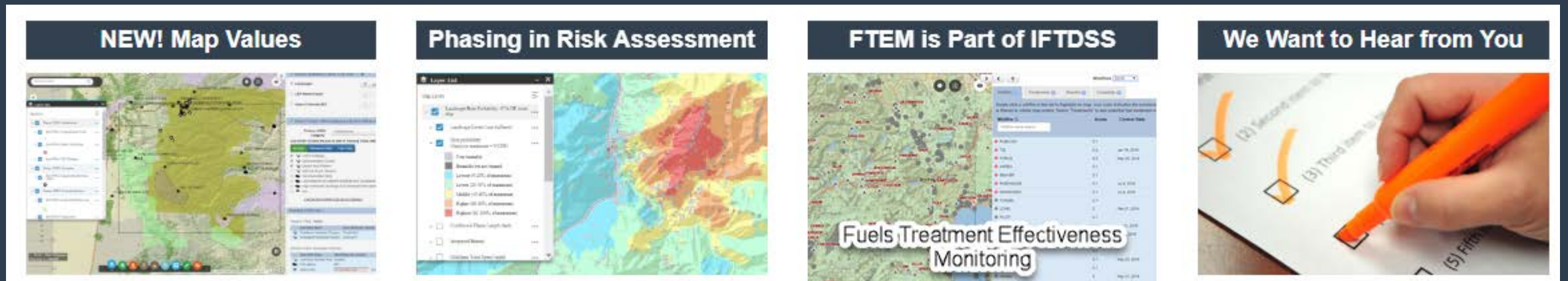
The screenshot shows the IFTDSS web application interface. At the top is a navigation bar with the IFTDSS logo and links for My Home, Cycle, My Workspace, Map Studio, and Playground. On the right side of the navigation bar, there is a Help dropdown, notification icons for 4 messages and 2 alerts, and the user name 'caroline noble'. Below the navigation bar is a large banner with the text 'Welcome to IFTDSS' and 'The Interagency Fuels Treatment Decision Support System'. The main content area features a circular diagram titled 'The Planning Cycle' with five stages: Landscape Evaluation, Strategic Planning, Implementation Planning, Monitoring, and Reporting, with 'Map Studio' in the center. To the right of the diagram is a text block explaining the cycle and providing a note about workspace sharing. Below this are three action cards: 'MODEL PLAYGROUND' (Use models to predict fire behavior.), 'START NEW' (Not sure where to start? The fuels planning cycle can help), and 'CONTINUE WORKING' (Head straight to your Workspace to pick up where you left off.).

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 Wildland Fire Management Research, Development, and Applications Group  
 Grand Marais, MN



# Presentation outline

- What is IFTDSS and why?
- What can IFTDSS do now?
- Where is IFTDSS going?
- How can I learn more about IFTDSS?



# What is IFTDSS and why?

To deal with the “software chaos” that exists in fuels management



- Web based application to facilitate common fuels management tasks
- Available to anyone and everyone (funded by USDOJ & USDA FS)
- Access to multiple tools from a single web-based portal
- Hosts common authoritative data, tools, models
- Scalable tool for planning effective fuels treatments

# How was it designed?

## IFTDSS Planning Cycle



- Stages of cycle correspond to commonly performed tasks
- Users can enter at any stage-free flowing design
- Does not require sequential steps
- Open design appeals to wider user base (novice to advanced)



# What can IFTDSS do now?

1. Cool easy map stuff
2. Model fire behavior across large landscapes
3. Generate summary reports for download
4. Develop and compare treatment scenarios
5. Aid in Prescribed Fire Planning
6. Fuels Treatment Effectiveness Monitoring



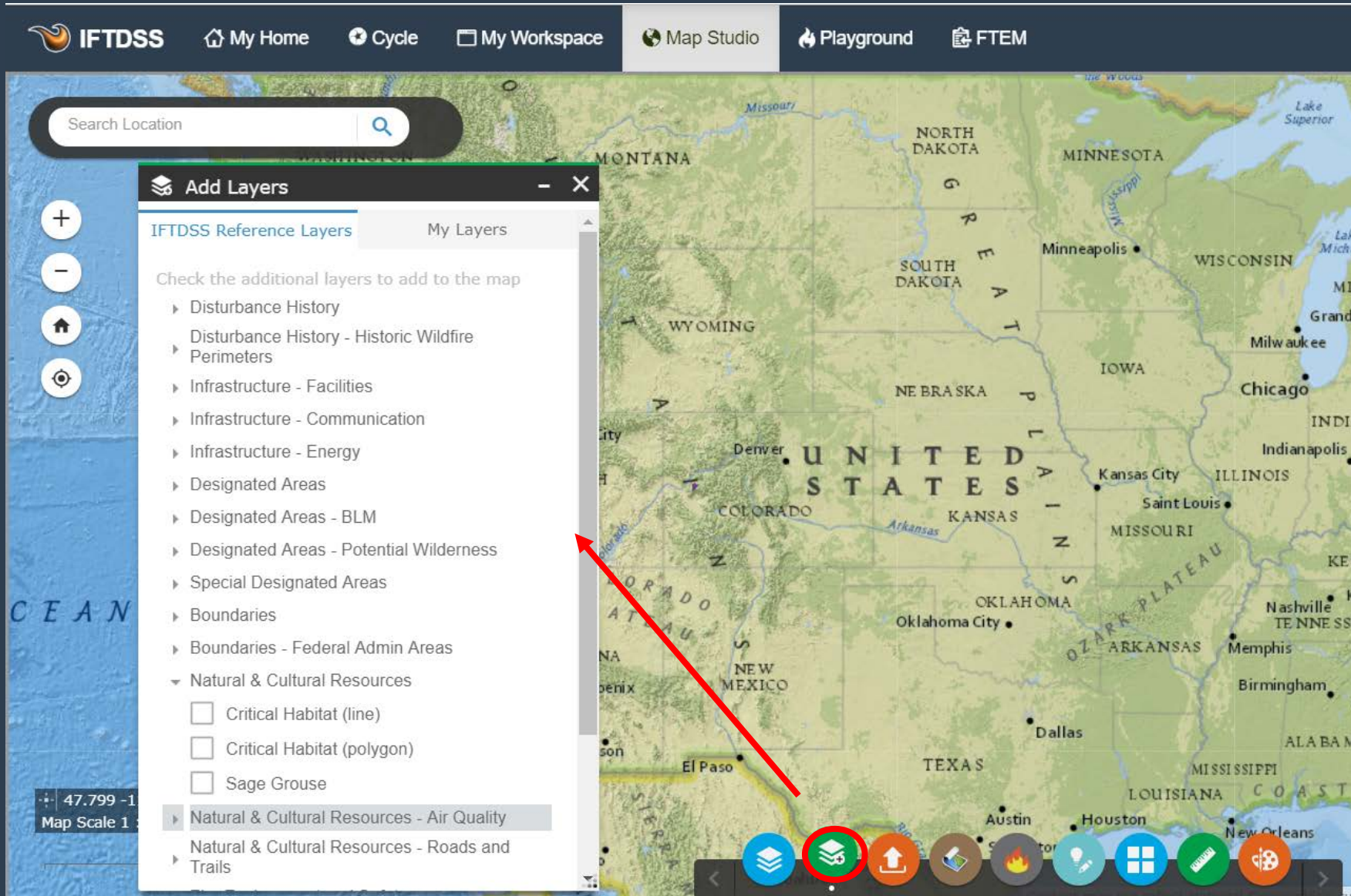
# What can IFTDSS do now?

## Cool easy map stuff

- Provides consistent nationwide reference datasets for planning purposes
- Create / Upload and save shapefiles
- Create / Edit landscapes using LANDFIRE data
- View/Analyze fire behavior outputs



# Cool easy map stuff — Provides consistent nationwide reference datasets for planning purposes



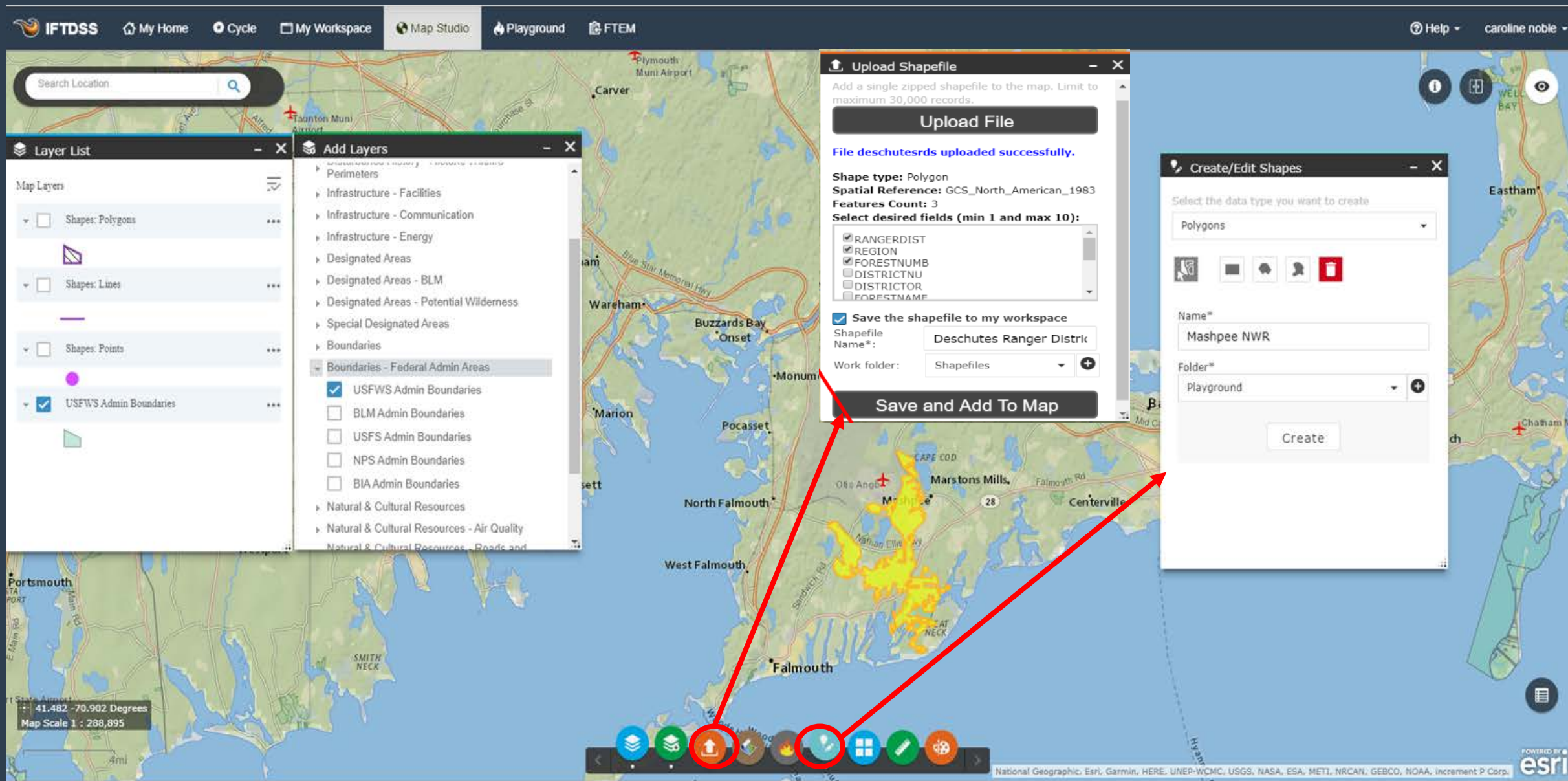
The screenshot displays the IFTDSS Map Studio interface. At the top, a navigation bar includes the IFTDSS logo and menu items: My Home, Cycle, My Workspace, Map Studio (active), Playground, and FTEM. Below the navigation bar is a search bar labeled 'Search Location'. The main area shows a map of the United States with state names and major cities visible. A 'Map Scale 1:47,799' is shown in the bottom left corner. A red arrow points to the 'Add Layers' panel, which is open and shows a list of reference layers under the 'IFTDSS Reference Layers' tab. The list includes:

- Disturbance History
  - Disturbance History - Historic Wildfire Perimeters
- Infrastructure - Facilities
- Infrastructure - Communication
- Infrastructure - Energy
- Designated Areas
  - Designated Areas - BLM
  - Designated Areas - Potential Wilderness
- Special Designated Areas
- Boundaries
  - Boundaries - Federal Admin Areas
- Natural & Cultural Resources
  - Critical Habitat (line)
  - Critical Habitat (polygon)
  - Sage Grouse
  - Natural & Cultural Resources - Air Quality**
  - Natural & Cultural Resources - Roads and Trails

The 'Add Layers' panel also has a 'My Layers' tab and a search icon. The map interface includes zoom controls (+, -, home, location) on the left and a toolbar with various icons at the bottom.



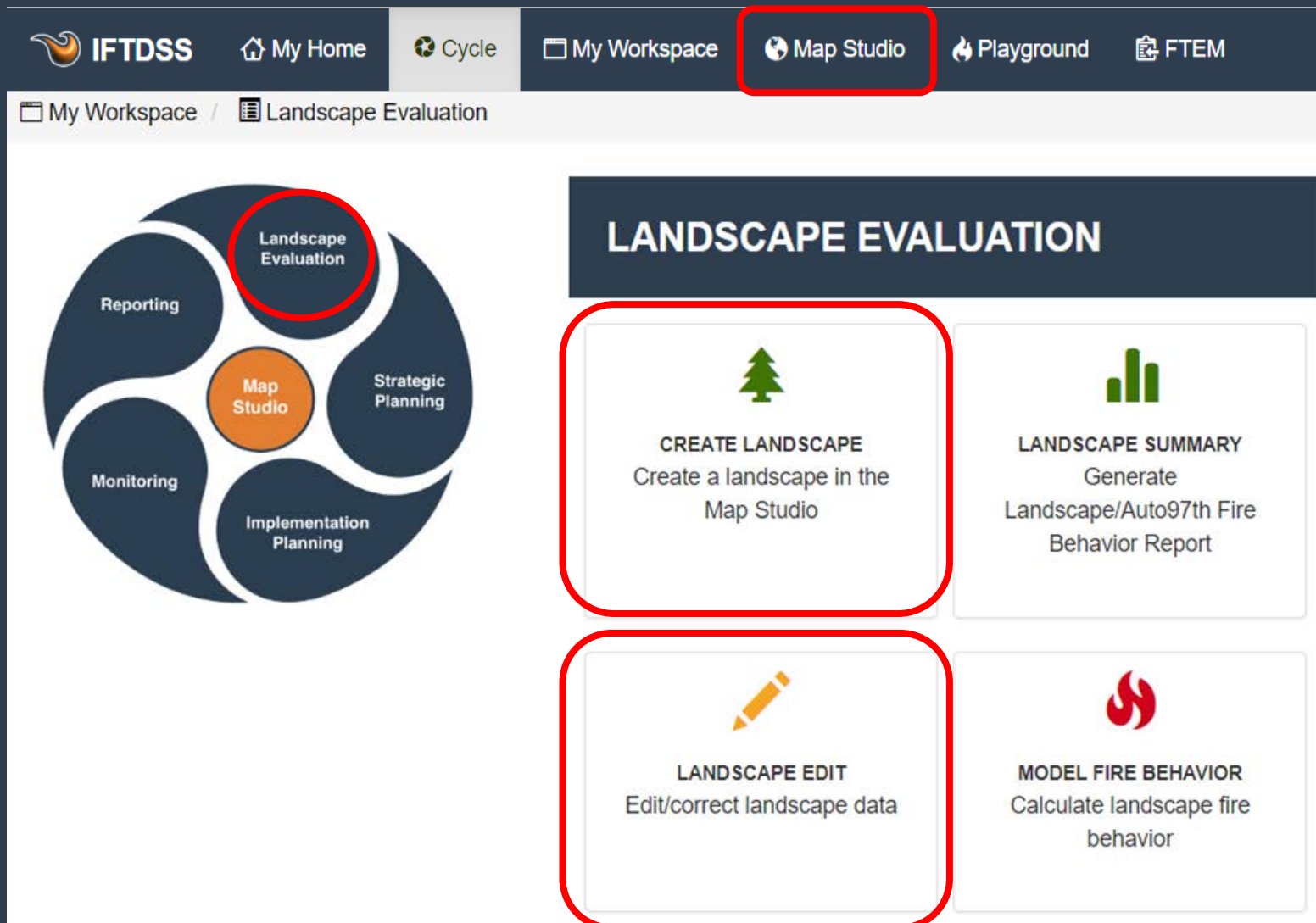
# Cool easy map stuff— Create shapes and upload shapefiles (points, lines, and polygons) to use as Masks for editing or Areas of Interest for reporting



The screenshot displays the IFTDSS Map Studio interface. At the top, navigation tabs include 'My Home', 'Cycle', 'My Workspace', 'Map Studio', 'Playground', and 'FTEM'. A search bar is located at the top left. The main map area shows a geographic region with various layers. On the left, a 'Layer List' panel shows 'USFWS Admin Boundaries' selected. An 'Add Layers' panel is also visible. A central 'Upload Shapefile' dialog box is open, displaying a success message: 'File deschutesrds uploaded successfully.' It shows the shapefile name 'Deschutes Ranger Distric', a 'Work folder' of 'Shapefiles', and a 'Save and Add To Map' button. To the right, a 'Create/Edit Shapes' dialog is open, with 'Polygons' selected as the data type, a name of 'Mashpee NWR', and a folder of 'Playground'. A 'Create' button is at the bottom of this dialog. Red arrows point from the 'Save and Add To Map' button in the upload dialog to the 'Create' button in the shapes dialog. The bottom of the interface features a toolbar with icons for map navigation and editing, including a red circle around the 'Upload' icon and another around the 'Create/Edit Shapes' icon. The bottom right corner includes the Esri logo and the text 'POWERED BY esri'.



# Cool easy map stuff— Create/Edit landscapes using Landfire data

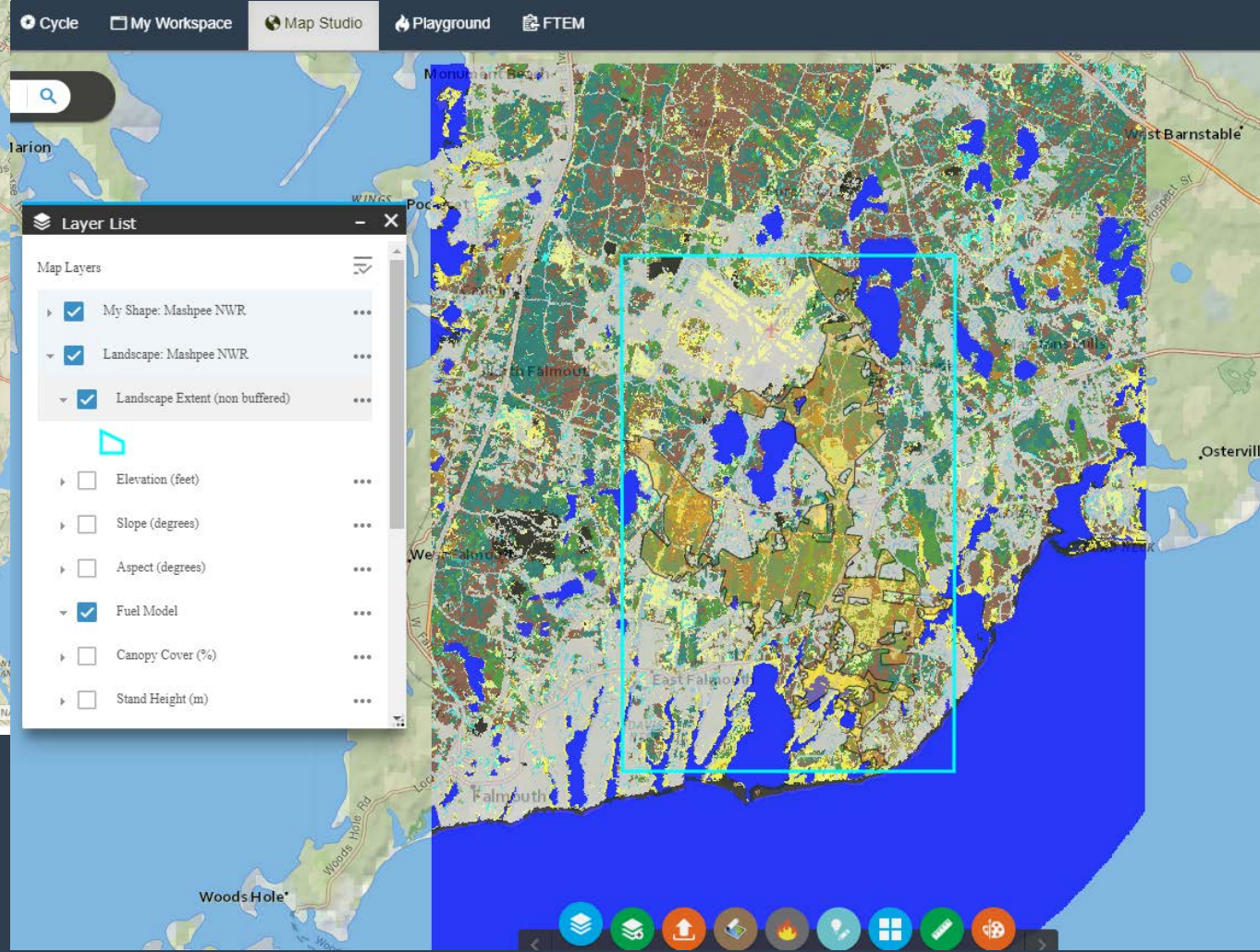
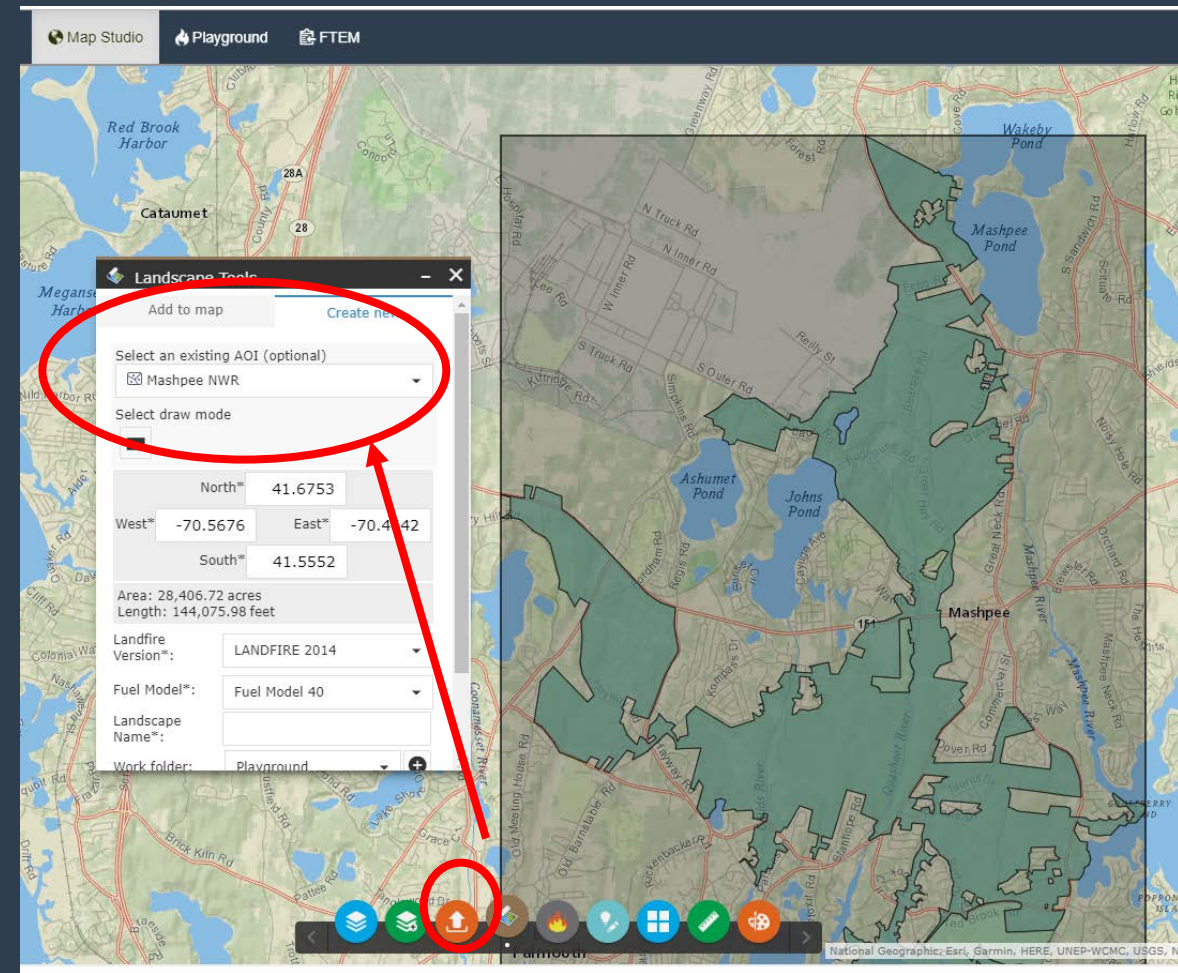


The screenshot shows the IFTDSS web application interface. At the top, there is a navigation bar with the following items: IFTDSS, My Home, Cycle, My Workspace, **Map Studio** (highlighted with a red box), Playground, and FTEM. Below the navigation bar, the breadcrumb path is 'My Workspace / Landscape Evaluation'. On the left side, there is a circular menu with five segments: Reporting, Map Studio (highlighted with a red circle), Strategic Planning, Implementation Planning, and Monitoring. The main content area is titled 'LANDSCAPE EVALUATION' and contains four cards, each highlighted with a red border:

- CREATE LANDSCAPE**: Create a landscape in the Map Studio (icon: tree)
- LANDSCAPE SUMMARY**: Generate Landscape/Auto97th Fire Behavior Report (icon: bar chart)
- LANDSCAPE EDIT**: Edit/correct landscape data (icon: pencil)
- MODEL FIRE BEHAVIOR**: Calculate landscape fire behavior (icon: flame)

- Create landscapes up to 3.5 million acres
- Edit landscapes with user defined rules
- Edit landscapes with default edit rules based on Landfire Look Up Rules

# Cool easy map — Create Landfire landscapes up to 3.5 million acres using an AOI (LF2016 data just released for some areas)





# Cool easy map — Edit landscapes using LANDFIRE tools

Edit Landscape ?

Landscape\* Mashpee NWR ✓

Treatment Edit Rule User Edit Rule

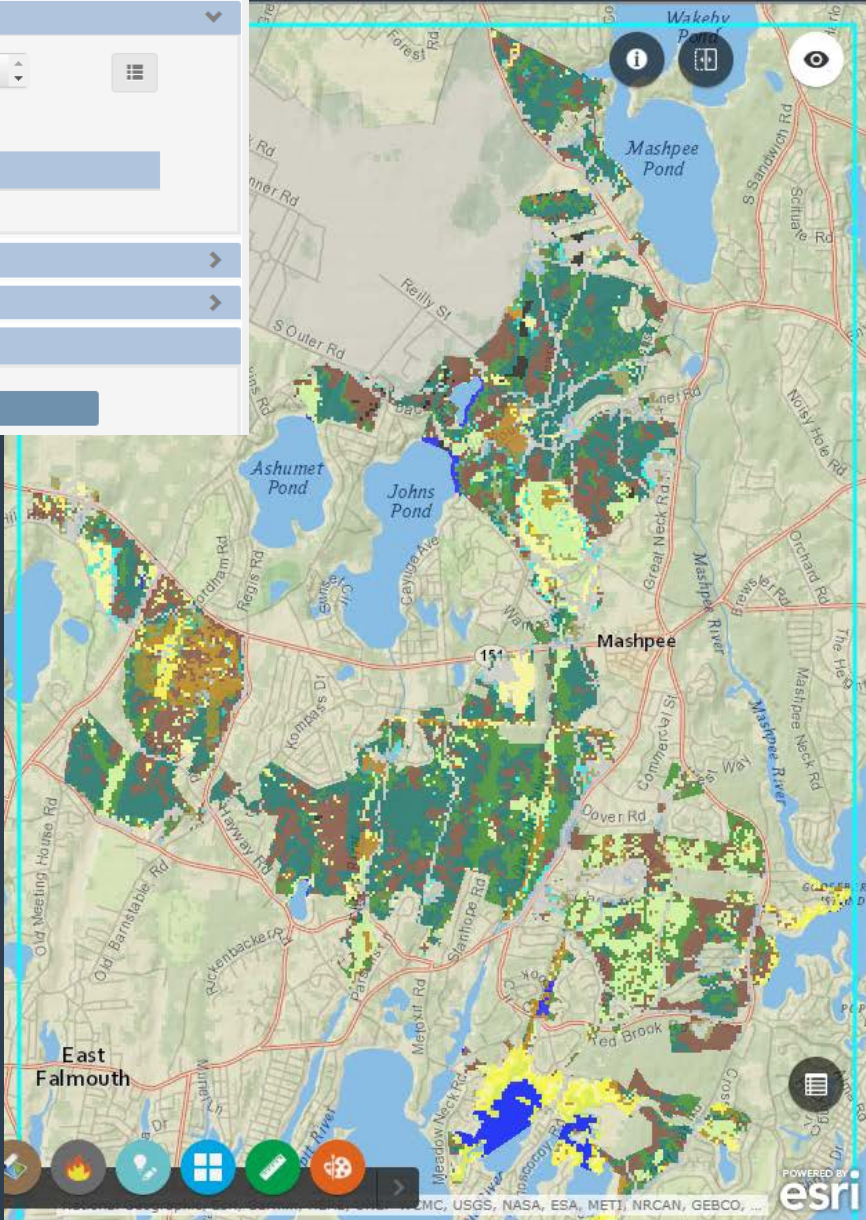
Order	Mask	Landscape Edit Rule

Add Default Fuels Treatment / Disturbance Edit Rule ?

Add User Created Edit Rule ?

Name Edited Landscape\* ?

Save



## Select Treatment / Disturbance Type\*

Thin: Slash Removed Thin: Slash Remains Clear Cut Wildland Fire

## Select Time Since Treatment / Disturbance\*

1 Year 2 to 5 Years 5 to 10 Years

## Apply to Landscape Mask (optional)

Mashpee NWR

Add to Rules Cancel

## Add User Created Edit Rule ?

### Where these conditions exist:

Attribute	Operator	Value
Fuel Model	is equal to	146 (SH6)

+ add row

### Modify the following values\*:

Attribute	Modifier	Value
Fuel Model	set to	144 (SH4)

+ add row

## Apply to Landscape Mask (optional)

Mashpee NWR

Add to Rules Cancel

## Name Edited Landscape\* ?

Updated Mashpee NWR October 2019

Save

Identify

Identify Results

Results found: 1 Clear

Landscape: Mashpee NWR

Elevation: 98 ft (30 m)

Slope: 2% (1 deg)

Aspect: Flat

Fuel Model: SH6 (146)

Canopy Cover: 75%

Stand Height: 57.4 ft (17.5 m)

Canopy Base Height: 32.8 ft (10 m)

Canopy Bulk Density: 0.001 lb/ft<sup>3</sup> (0.01 kg/m<sup>3</sup>)



# What can IFTDSS do now?


## Model fire behavior across large landscapes

- Auto97th OR User defined inputs
- Landscape Fire Behavior (30m)
- Landscape Burn Probability (30-150m)
- Generate Integrated Hazard maps
- Overlay HVRAs

The screenshot shows the IFTDSS web application interface. At the top, there is a navigation bar with tabs for 'My Home', 'Cycle', 'My Workspace', 'Map Studio', 'Playground' (highlighted with a red box), and 'FTEM'. Below the navigation bar, the breadcrumb path is 'My Workspace / Landscape Evaluation'. The main content area features a central circular diagram with five segments: 'Reporting', 'Landscape Evaluation', 'Strategic Planning', 'Map Studio', and 'Implementation Planning'. Red circles highlight 'Landscape Evaluation' and 'Strategic Planning', with red arrows pointing to their respective sections. The 'LANDSCAPE EVALUATION' section contains four cards: 'CREATE LANDSCAPE' (with a tree icon), 'LANDSCAPE SUMMARY' (with a bar chart icon), 'LANDSCAPE EDIT' (with a pencil icon), and 'MODEL FIRE BEHAVIOR' (with a fire icon). The 'MODEL FIRE BEHAVIOR' card is highlighted with a red border. The 'STRATEGIC PLANNING' section contains three cards: 'DEVELOP TREATMENT ALTERNATIVES' (with a checkmark icon), 'MAP VALUES' (with a location pin icon, highlighted with a red border), and 'COMPARISON DASHBOARD' (with a bar chart icon). A 'Future Development' tag is visible at the bottom of the 'COMPARISON DASHBOARD' card.

# Model fire behavior across large landscapes : Landscape Fire Behavior Auto97th

My Workspace / Landscape Evaluation



## LANDSCAPE EVALUATION

- CREATE LANDSCAPE**  
Create a landscape in the Map Studio
- LANDSCAPE SUMMARY**  
Generate Landscape/Auto97th Fire Behavior Report
- LANDSCAPE EDIT**  
Edit/correct landscape data
- MODEL FIRE BEHAVIOR**  
Calculate landscape fire behavior

### View Input

#### Model Run Details

**Model Run Name:** Eastern Mass - Auto97th  
**Date Created:** Oct 22, 2019 6:07:44 PM  
**Model Type:** Landscape Fire Behavior

**Landscape Name:** Eastern Mass  
**Resolution (meters):** 30  
**Owner:** caroline

#### Wind

**Wind Type:** Gridded Winds  
**Wind Speed (mph):** 14  
**Wind Direction (degrees):** 225

#### Crown Fire Inputs

**Crown Fire Method:** Scott/Reinhardt  
**Foliar Moisture Content (%):** 100

#### Fuel Moisture Conditioning

**Conditioning:** Off - Initial fuel moisture used

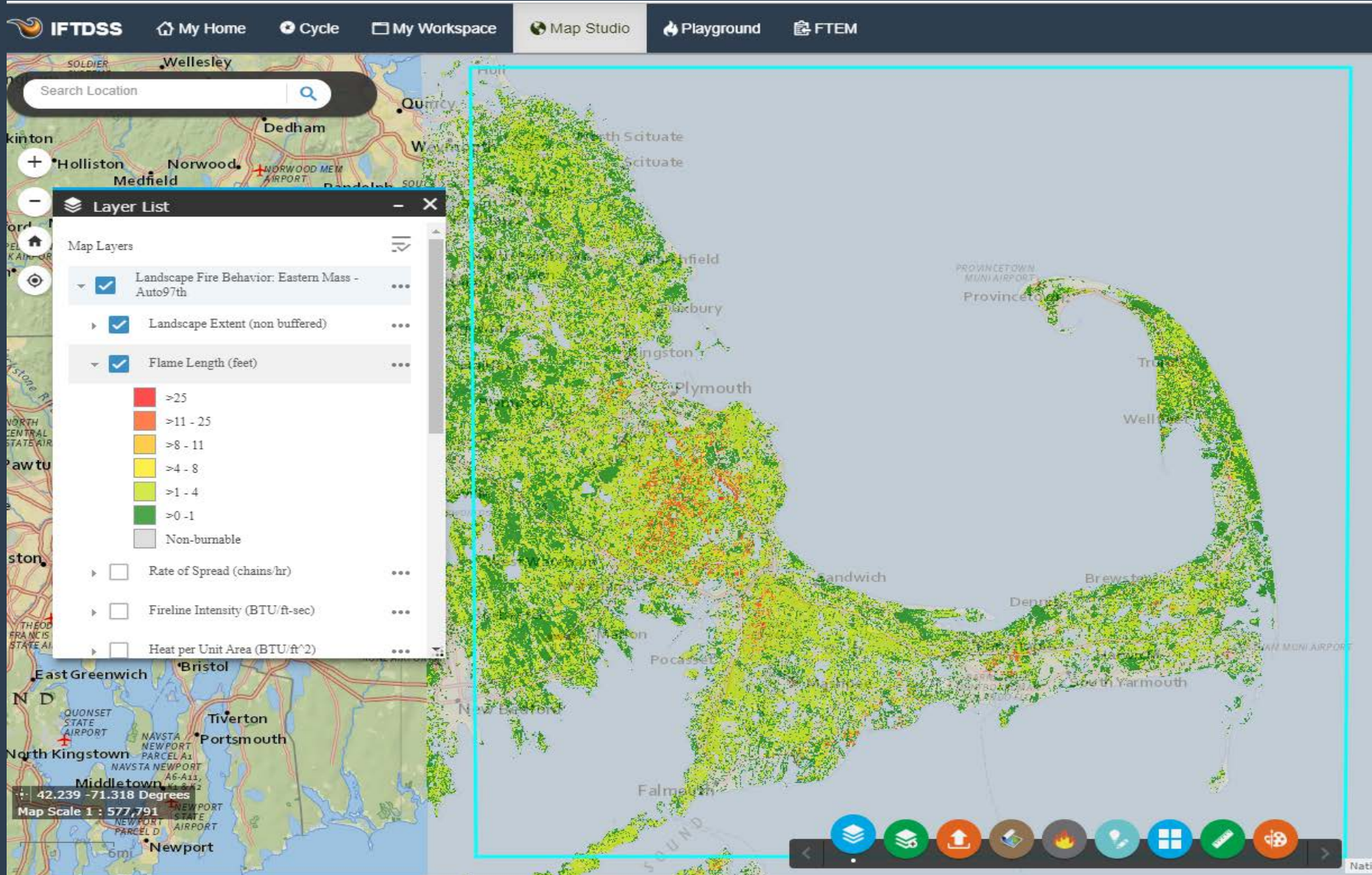
#### Initial Fuel Moisture

Fuel Model	1hr FM	10hr FM	100hr FM	Herb FM	Woody FM
All	7	8	14	153	167

OK

- Closest representative RAWS station
- 97<sup>th</sup> percentile conditions for Initial Fuels Moistures based on ERC
- 97th percentile wind conditions
- Crown fire defaults (S/R & 100% foliar moisture)

# Model fire behavior across large landscapes: Landscape Fire Behavior Auto97th



## Eastern Mass - Auto97th

- **Name:** Eastern Mass - Auto97th
- **Owner:** caroline
- **Created:** Oct 22, 2019 6:07:44 PM
- **Landscape:** Eastern Mass
- **Status:** Running
- **Model Type:** Landscape Fire Behavior
- **Folder:** [Playground](#)
- **Wind Type:** Gridded Winds
- **Wind Speed:** 14
- **Wind Direction:** 225
- **Crown Fire Method:** Scott/Reinhardt
- **Foliar Moisture:** 100

## Fuel Moisture Conditioning

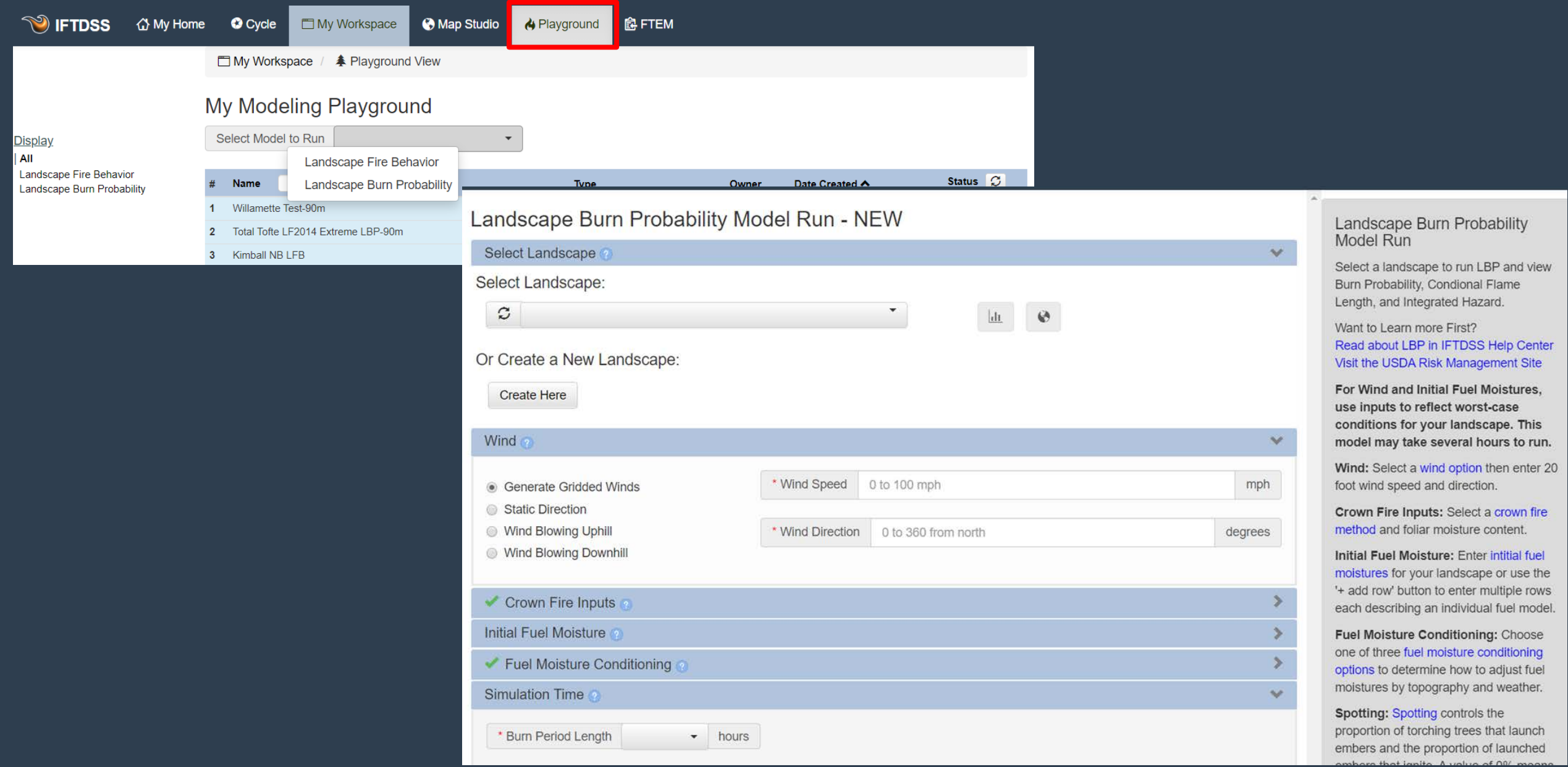
- **Conditioning:** Off - Initial fuel moisture used

## Initial Fuel Moistures

- **Fuel Model:** All
- **1hr FM:** 7
- **10hr FM:** 8
- **100hr FM:** 14
- **Herbaceous FM:** 153
- **Woody FM:** 167



# Model fire behavior across large landscapes : Landscape Fire Behavior/Landscape Burn Probability with user defined inputs in the Playground



The screenshot shows the IFTDSS Playground interface. At the top, the 'Playground' tab is highlighted with a red box. Below the navigation bar, the 'My Modeling Playground' section is visible, containing a table of model runs and a 'Select Model to Run' dropdown menu. The 'Landscape Burn Probability' model is selected, and its configuration page is displayed. The configuration page includes a 'Select Landscape' dropdown, a 'Create Here' button, and several input sections: 'Wind' (with options for gridded winds, static direction, uphill, or downhill, and input fields for wind speed and direction), 'Crown Fire Inputs', 'Initial Fuel Moisture', 'Fuel Moisture Conditioning', and 'Simulation Time' (with a 'Burn Period Length' input field).

My Modeling Playground

Select Model to Run

#	Name	Type	Owner	Date Created	Status
1	Willamette Test-90m				
2	Total Tofte LF2014 Extreme LBP-90m				
3	Kimball NB LFB				

### Landscape Burn Probability Model Run - NEW

Select Landscape ?

Select Landscape:

Or Create a New Landscape:

Create Here

Wind ?

- Generate Gridded Winds
- Static Direction
- Wind Blowing Uphill
- Wind Blowing Downhill

\* Wind Speed 0 to 100 mph mph

\* Wind Direction 0 to 360 from north degrees

✓ Crown Fire Inputs ?

Initial Fuel Moisture ?

✓ Fuel Moisture Conditioning ?

Simulation Time ?

\* Burn Period Length hours

Landscape Burn Probability Model Run

Select a landscape to run LBP and view Burn Probability, Conditional Flame Length, and Integrated Hazard.

Want to Learn more First?  
[Read about LBP in IFTDSS Help Center](#)  
[Visit the USDA Risk Management Site](#)

**For Wind and Initial Fuel Moistures, use inputs to reflect worst-case conditions for your landscape. This model may take several hours to run.**

**Wind:** Select a [wind option](#) then enter 20 foot wind speed and direction.

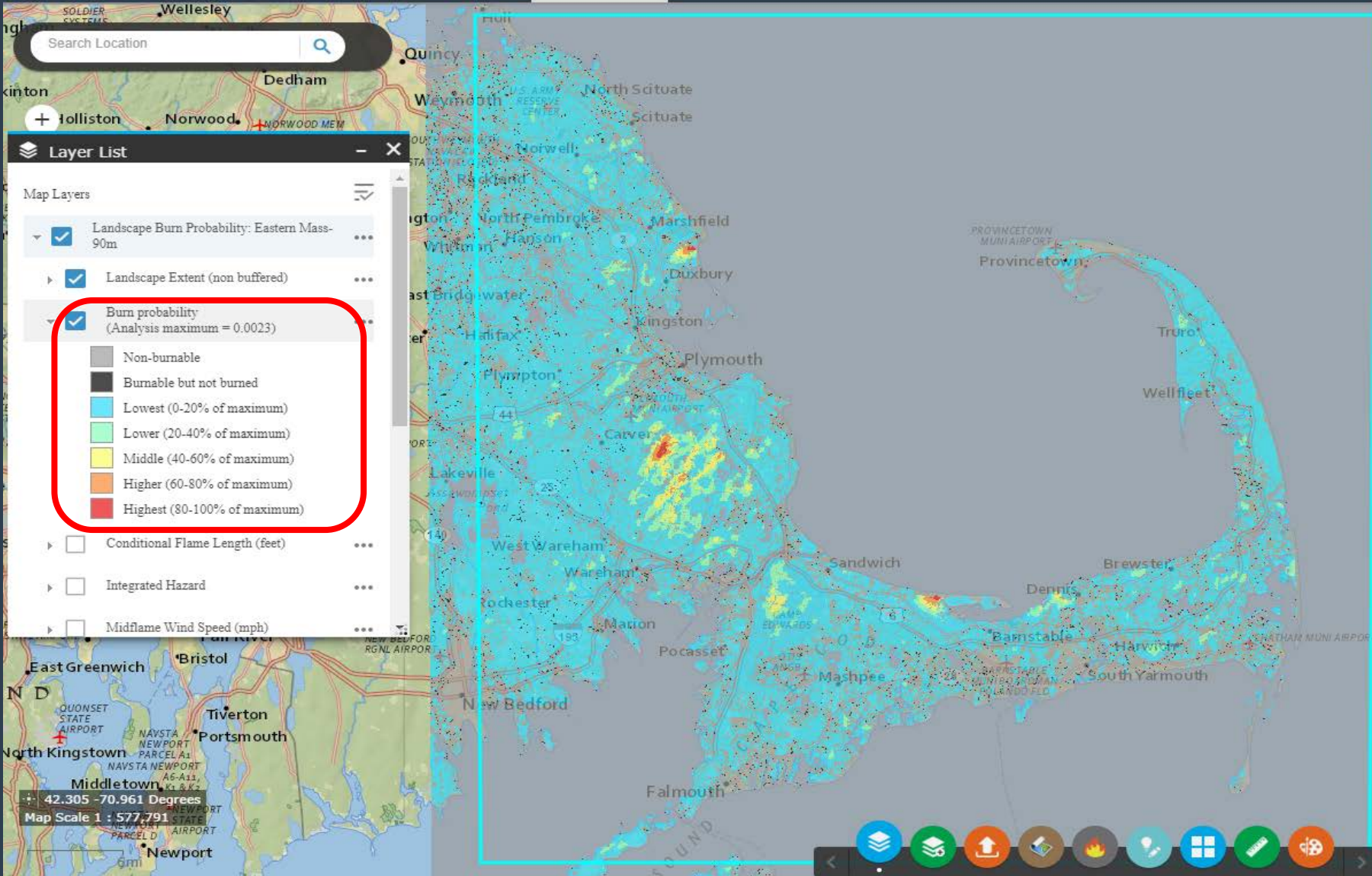
**Crown Fire Inputs:** Select a [crown fire method](#) and foliar moisture content.

**Initial Fuel Moisture:** Enter [initial fuel moistures](#) for your landscape or use the '+ add row' button to enter multiple rows each describing an individual fuel model.

**Fuel Moisture Conditioning:** Choose one of three [fuel moisture conditioning options](#) to determine how to adjust fuel moistures by topography and weather.

**Spotting:** [Spotting](#) controls the proportion of torching trees that launch embers and the proportion of launched embers that ignite. A value of 0% means

# Model fire behavior across large landscapes: Landscape Burn Probability



## Eastern Mass-90m

- **Name:** Eastern Mass-90m
- **Owner:** caroline
- **Created:** Sep 22, 2019 8:33:55 AM
- **Landscape:** Eastern Mass
- **Status:** Completed
- **Model Type:** Landscape Burn Probability
- **Wind Type:** Gridded Winds
- **Wind Speed:** 25
- **Wind Direction:** 225
- **Crown Fire Method:** Scott/Reinhardt
- **Foliar Moisture:** 100

## Fuel Moisture Conditioning

- **Conditioning:** Off - Initial fuel moisture used

## Initial Fuel Moistures

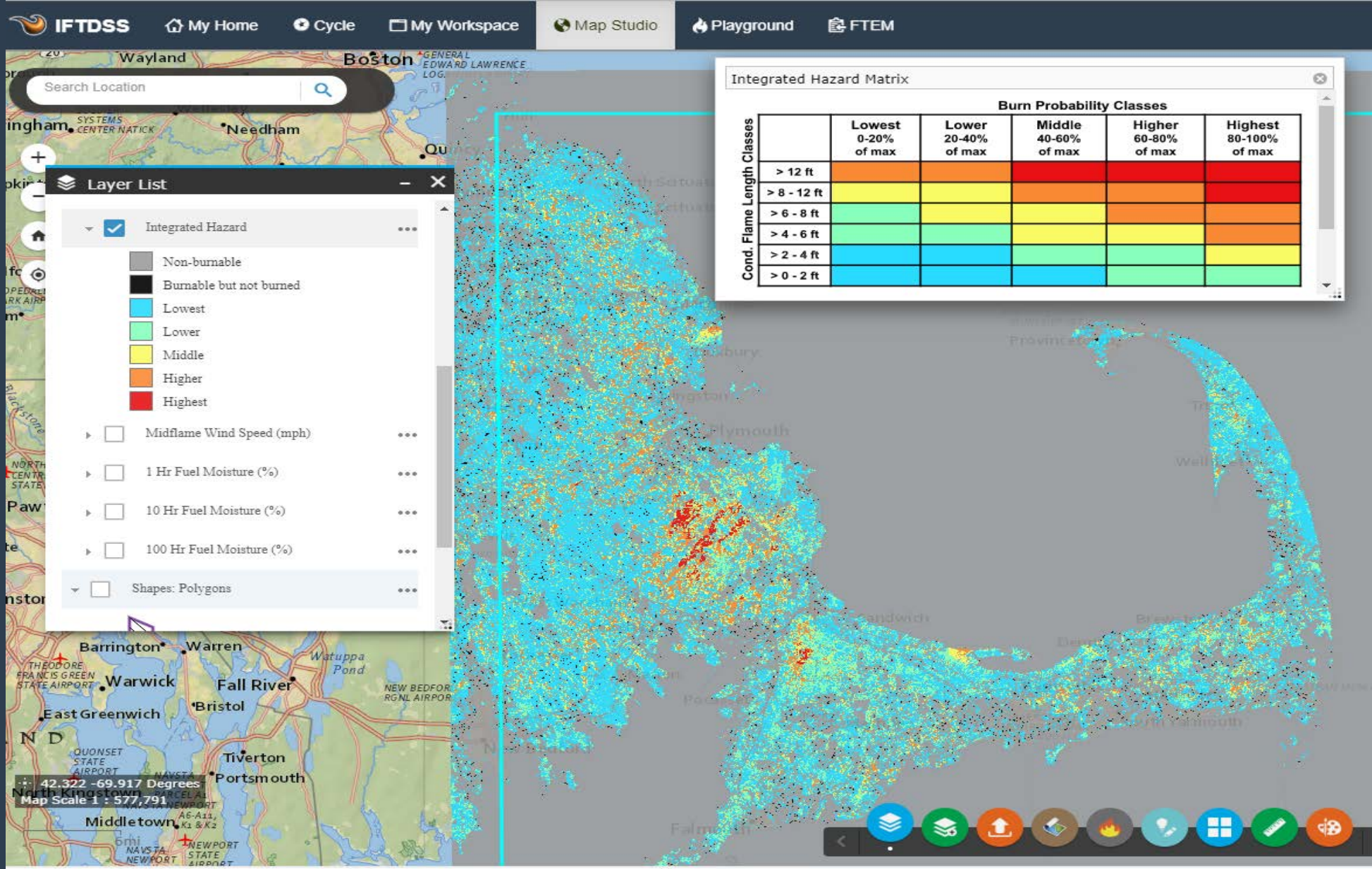
- **Fuel Model:** All
- **1hr FM:** 6
- **10hr FM:** 7
- **100hr FM:** 12
- **Herbaceous FM:** 90
- **Woody FM:** 110

## Completed Fire Summary

- **Number of fires run:** 161155
- **Number of fires failed:** 0
- **Percent burnable cells burned:** 97.7 %



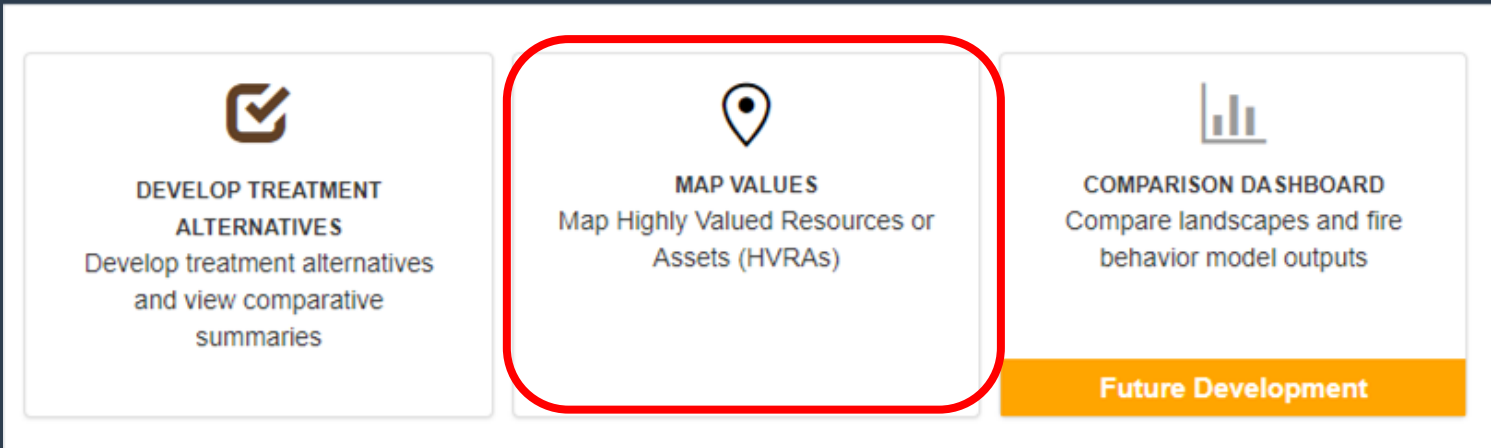
# Model fire behavior across large landscapes: Generate Integrated Hazard maps with Landscape Burn Probability runs





# Model fire behavior across large landscapes: Overlay HVRAs

## STRATEGIC PLANNING



- Create HVRA sets at all scales
- Use sets for analysis or to overlay with Landscapes or Fire Behavior Outputs in Map Studio
- Copy or Edit existing sets

### View HVRA Set

HVRA Set Name: Total Tofte HVRA Set - All Ref ?

#### Primary HVRA: Communities

Sub-HVRA Name	Short Name
Low density (>0-28 people per square mile)	Low
Moderate density (>28-250 people per square mile)	Moderate

#### Primary HVRA: Infrastructure

Sub-HVRA Name	Short Name
Low/Moderate Investment Buildings and Developed Recreation Sites	Low Inv
Powerlines	Pwrline
Communication Sites	Com Site
High Investment Buildings and Developed Recreation Sites	High Inv

#### Primary HVRA: Municipal Drinking Water

Sub-HVRA Name	Short Name
Lowest value (< 10th percentile)	Lowest
Low value (30th - 39th percentile)	Low
Moderately low value (40th - 49th percentile)	Mod Low
Highest value (90th - 99th percentile)	Highest
Moderately high value (50-59th percentile)	Mod High

#### Primary HVRA: Air Quality

Sub-HVRA Name	Short Name
Moderate PM2.5 Emission Potential	Moderate
High PM2.5 Emission Potential	High

# Model fire behavior across large landscapes: Overlay HVRAs

ie Cycle My Workspace Map Studio Playground FTEM Help carol

### Layer List

- Primary HVRA: Ecosystem Function
- Primary HVRA: Infrastructure
- Sub-HVRA: Communication Towers
- Sub-HVRA: Transmission Lines
- HVRA Set: Extent
- Landscape: Eastern Mass
- Shapes: Polygons
- Shapes: Lines
- Shapes: Points
- Primary HVRA: Wildlife
- Sub-HVRA: Endangered Vertebrate (Polygon)
- Primary HVRA: Air Quality
- Primary HVRA: Communities
- Sub-HVRA: Low density (>0-28 people per square mile)
- Sub-HVRA: Moderate density (>28-250 people per square mile)

### Map Values

Geographic Extent

Name: Eastern Mass  
Type: Landscape

Select Primary HVRA Category and Sub-HVRAs (maximum of 10 each)

Primary HVRA Category\* Recreation

Sub-HVRA\* (Check the box)

- Clear Selection
- Air Quality
- Communities
- Ecosystem Function
- Infrastructure
- Municipal Drinking Water
- Priority Vegetation
- Rangeland Values
- Recreation
- Wildlife

All Data Reference Data

- USFWS Trails
- Cape Cod MA
- Cape Cod NS bounda
- Mashpee NWR
- Mashpee Thinning
- MASS
- Myles Standish Rx B
- Myles Standish State
- Myles Standish State Park

List the Sub-HVRAs that did not intersect

### Pending HVRA Set

Primary HVRA: Communities

Sub-HVRA Name	Short Name (for reports)
Low density (>0-28 people per square mile)	Low
Moderate density (>28-250 people per square mile)	Moderate
High density (>250 people per square mile)	High

Primary HVRA: Infrastructure

Sub-HVRA Name	Short Name (for reports)
Communication Towers	Comm Tower
Transmission Lines	Trans Line

POWERED BY esri



# Model fire behavior across large landscapes: Overlay HVRAs

IFTDSS My Home Cycle My Workspace Map Studio Playground FTEM

Search Location

Layer List

- Shapes: Lines
- Shapes: Points
- Primary HVRA: Wildlife
- Primary HVRA: Communities
- Sub-HVRA: Low density (>0-28 people per square mile)
- Sub-HVRA: Moderate density (>28-250 people per square mile)
- Sub-HVRA: High density (>250 people per square mile)

Select the layer you want to swipe


Landscape Burn Probability: Eastern N

# What can IFTDSS do now?


Generate summary reports and download / export

Auto 97th Landscape Fire Behavior Report

### LANDSCAPE EVALUATION



**CREATE LANDSCAPE**  
Create a landscape in the Map Studio



**LANDSCAPE SUMMARY**  
Generate Landscape/Auto97th Fire Behavior Report

## Landscape Summary

Select Landscape:

My Landscapes\*

[View in Map Studio](#)

[Request a Report](#)

Area of Interest

Create a Landscape:

[Create Here](#)

- Search (name)
- Cape Cod MA
- Cape Cod NS boundary
- Mashpee NWR
- MASS
- Myles Standish State Forest
- Myles Standish State Park

### Landscape Details

**Landscape Name:** Eastern Mass

**Date Created:** Sep 21, 2019 3:50:49 PM

**Landscape Source Data:** LANDFIRE 2014

**Landscape Buffer (meters):** 4980

**Owner:** caroline

**Landscape Status:** ✓

**Resolution (meters):** 30

**Acres:** 2000484.76

### Eastern Mass

Report Name

Action

✓ [Landscape/Auto97th Fire Behavior Report](#)

The Landscape/Auto97th Fire Behavior Summary Report has been created. Click the link to open the report

[Close](#)



# Generate summary reports and download / export

[My Workspace](#) / [Myles Standish](#)

Type	Name	Subtype
Report	Myles Standish 1 YR Post Rx/Myles Standish Monument State Res - compare model/Myles Standish Rx Burn Units	Landscape Fire Behavior Compare
Report	Myles Standish 1 YR Post Rx/Myles Standish Monument State Res - compare LCP/Myles Standish Rx Burn Units	Landscape Compare
Model Output	Myles Standish 1 YR Post Thining	Landscape Fire Behavior
Report	Myles Standish Monument State Res - Auto97th/Myles Standish State Forest	Landscape Fire Behavior Auto 97
Model Output	Myles Standish Monument State Res - Auto97th	Landscape Fire Behavior
Landscape	Myles Standish 1 YR Post Thining	
Model Output	Myles Standish 1 YR Post Rx	Landscape Fire Behavior
Model Output	Myles Standish Monument State Res	Landscape Fire Behavior
<a href="#">View on Map</a> <a href="#">Download</a> <a href="#">Delete</a> <a href="#">Request a Report</a>		
Landscape	Myles Standish 1 YR Post Rx	
Report	Myles Standish Monument State Res - LCP/Myles Standish State Forest	Landscape
Shape	Myles Standish Rx Burn Units	Polygon
Landscape	Myles Standish Monument State Res	

## Display

All

- Report
- Model Output
- Landscape
- Shape

## Folders

- All Content
- AA TNC DEMO
- Acadia
- Apalachicola NF
- BLM ABQ demo
- CACO
- Chatahoochee- Oconee
- Eldorado/Tahoe NF
- Everglades NP
- Feb. 26 testing
- Flagler County
- Gila NF
- Glacier NP
- Granite Creek Treatm
- Great Smoky Mountain
- Gulf Islands Nationa
- Haypress Creek Proje
- INDU

# Generate summary reports and download / export



## LANDSCAPE CHARACTERISTICS

[All Lcp](#)

- Aspect
- Canopy Base Height
- Canopy Bulk Density
- Canopy Cover
- Elevation
- Fuel Model (FBFM)
- Slope
- Stand Height

## MODEL CHARACTERISTICS

- All Model
- Crown Fire
- Flame Length
- Heat/Area
- Intensity
- Spread Rate

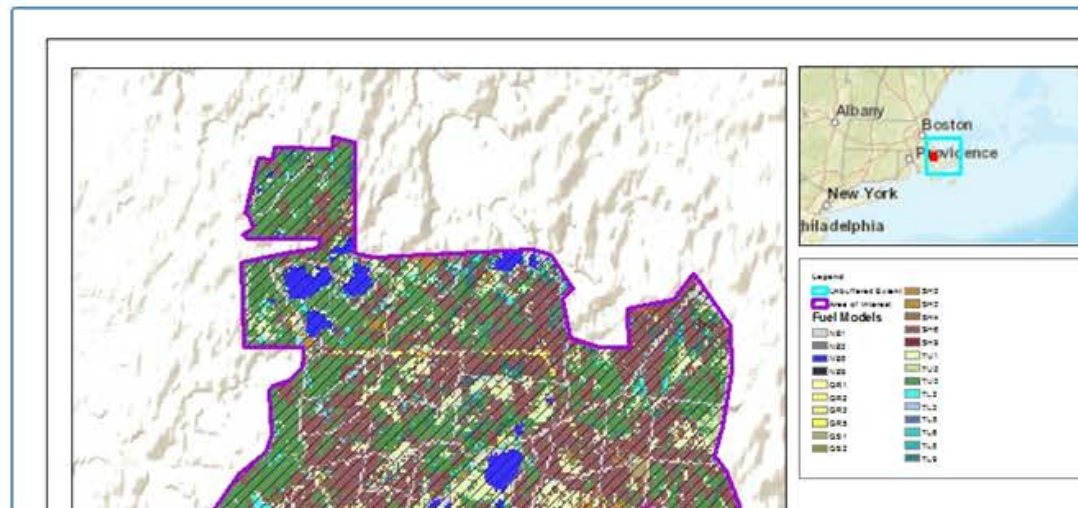
## Model Parameters

**Run Name:** Eastern Mass - Auto97th  
**Model Type:** Landscape Fire Behavior  
**Run Date:** Sep 22, 2019 8:22:53 AM  
**Wind Type:** Gridded Winds  
**Wind Speed:** 14 mph  
**Wind Direction:** 225 deg  
**Crown Fire Method:** Scott/Reinhardt  
**Foliar Moisture:** 100  
**Conditioning:** Off - Initial fuel moisture used

**Station Name:** CACO  
**Station Observation Start Date:** Apr 1, 2003 12:00:00 AM  
**Station Observation End Date:** Oct 4, 2016 12:00:00 AM  
**Station Elevation:** 140  
**Station Aspect:** 4  
**Station Latitude:** 41.9755555  
**Station Longitude:** 70.0241666

Fuel Model	1 Hr Fuel Moisture	10 Hr Fuel Moisture	100 Hr Fuel Moisture	Live Herbaceous Fuel Moisture	Live Woody Fuel Moisture
All	7	8	14	153	167

## Fuel Model (FBFM)





# Generate summary reports and download / export

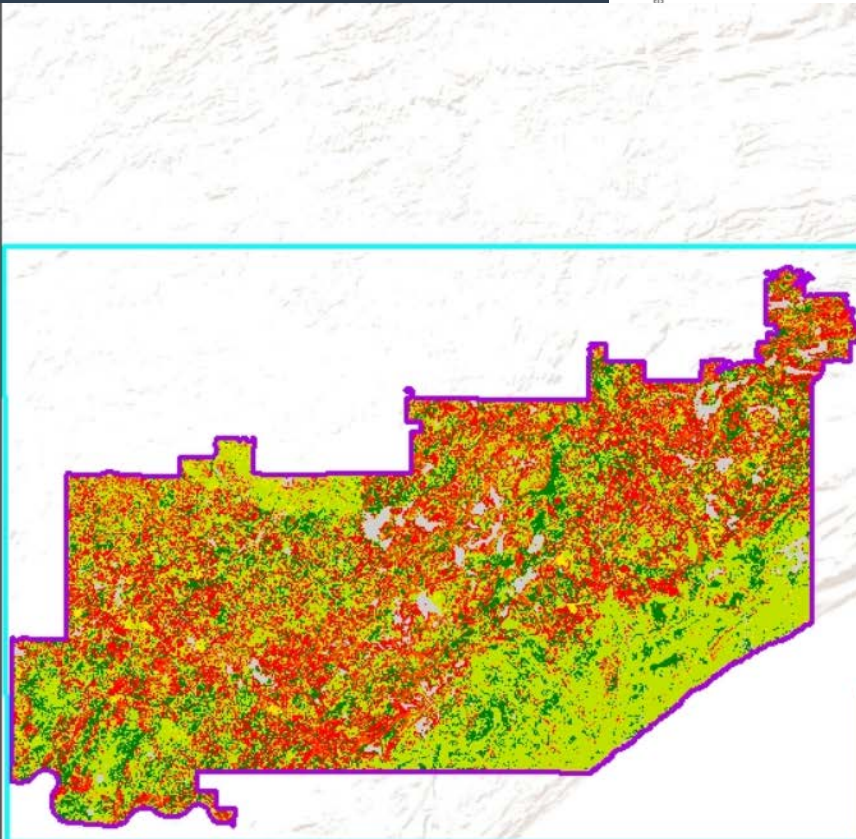
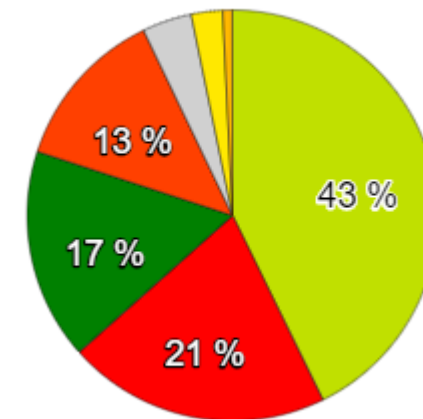
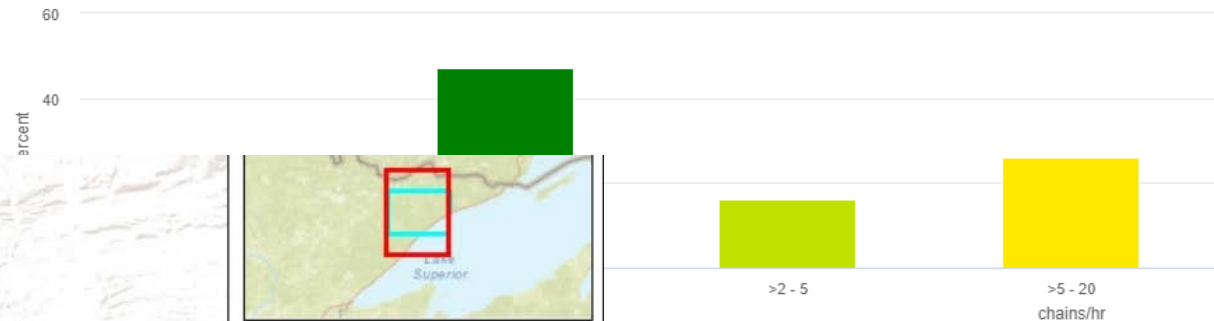


Report: Auto97th  
 Landfire Version: LANDFIRE 2014  
 Landscape Name: Eastern Mass  
 Landscape Acres: 2,000,485  
 Area of Interest: Myles Standish State Forest

Prepared for: caroline noble  
 10/21/2019, 5:01:56 AM

## Rate of Spread (chains/hr) Data Summary for Area of Interest "Myles Standis Landscape"

Source Landscape Name: Eastern Mass  
 Landfire Version: LANDFIRE 2014  
 Source Landscape Acres: 2,000,485  
 Area of Interest Name: Myles Standish State Forest  
 Area of Interest Acres: 12,441  
 Model Name: Eastern Mass - Auto97th



**Legend**

- Unbuffered Extent
- Area of Interest
- Non-burnable

**Flame Length (ft)**

- >25
- >11 - 25
- >8 - 11
- >4 - 8
- >1 - 4
- >0 - 1



**Interagency Fuel Treatment  
 Decision Support System**

### Landscape Fire Behavior Summary Flame Length

**Analysis Details:**  
 Date: 01/30/2020  
 LANDFIRE Version: LANDFIRE 2016  
 IFTDSS User name: bschueller  
 LCP Name: Total Tofte LF2016

**Model Inputs:**  
 Wind Type: Gridded Winds  
 Wind Speed: 14

## Flame Length (feet) Data Summary for Area of Interest "totaltofteboundary" within "Total Tofte LF2016" Landscape

Source Landscape Name: Total Tofte LF2016  
 Landfire Version: LANDFIRE 2016  
 Source Landscape Acres: 933,505  
 Area of Interest Name: totaltofteboundary  
 Area of Interest Acres: 482,577  
 Model Name: Total Tofte LF2016 - Auto97th

Copy CSV Excel PDF Print

Show 10 entries

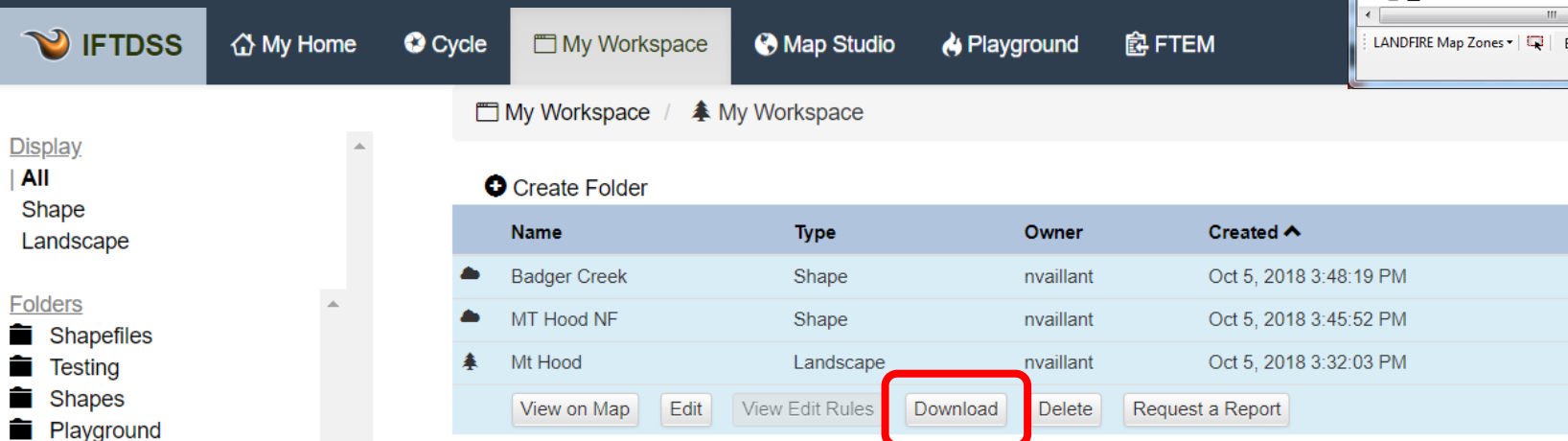
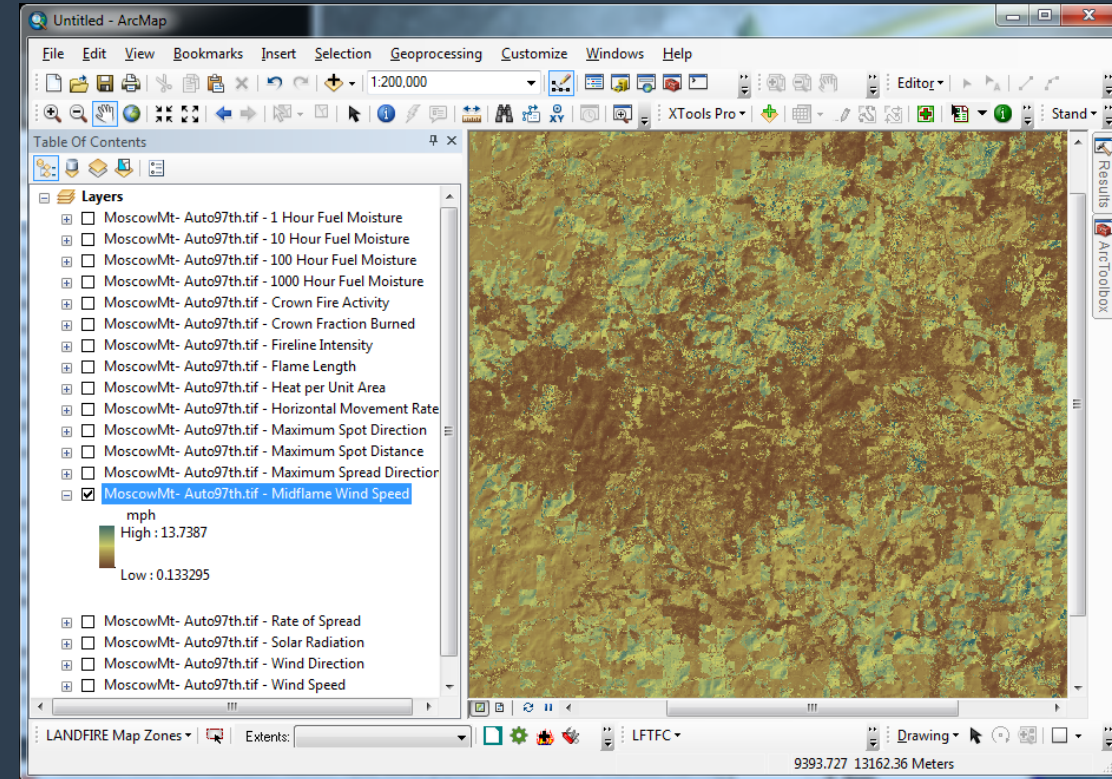
Flame Length (feet)	Pixel Count (freq)	Acres In AOI	Percent In AOI
Non-burnable	84,696	18,836	4
>0 - 1	360,662	80,209	17
>1 - 4	927,388	206,246	43
>4 - 8	53,415	11,879	2
>8 - 11	16,355	3,637	1
>11 - 25	278,449	61,926	13
>25	448,946	99,843	21

Showing 1 to 7 of 7 entries

# Generate summary reports and download / export

## Export landscape data and fire model outputs

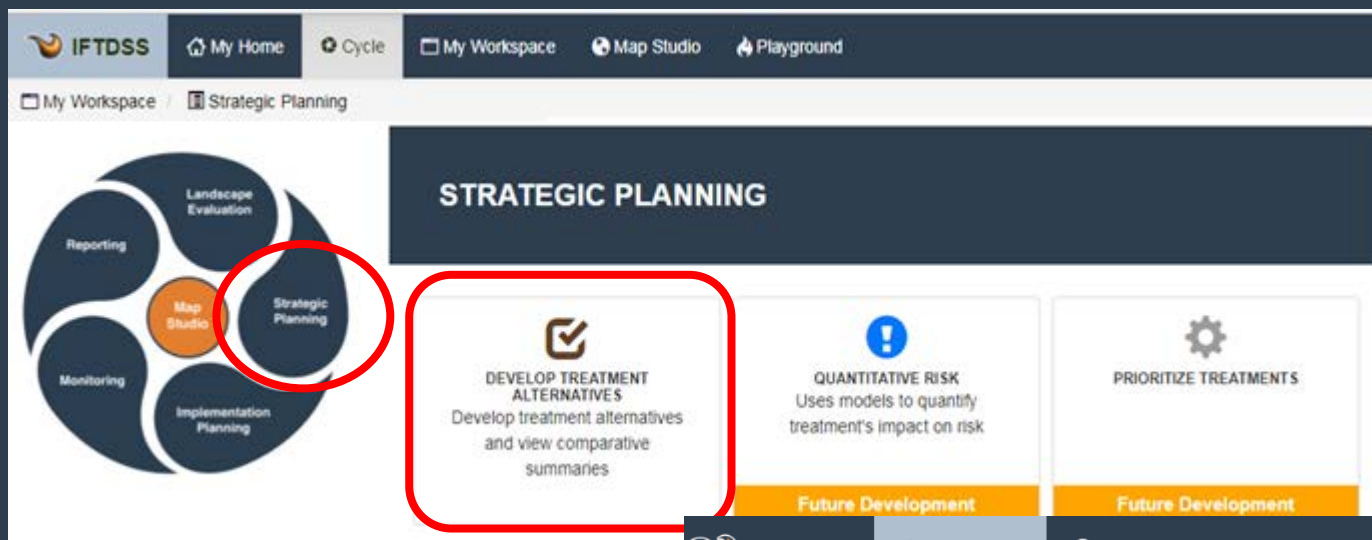
- Multi-band GeoTiffs
- Original and edited landscapes
- Fire model outputs
- Use in other programs that need LCPs (FlamMap, FARSITE, etc.)
- Bring into GIS for further analysis



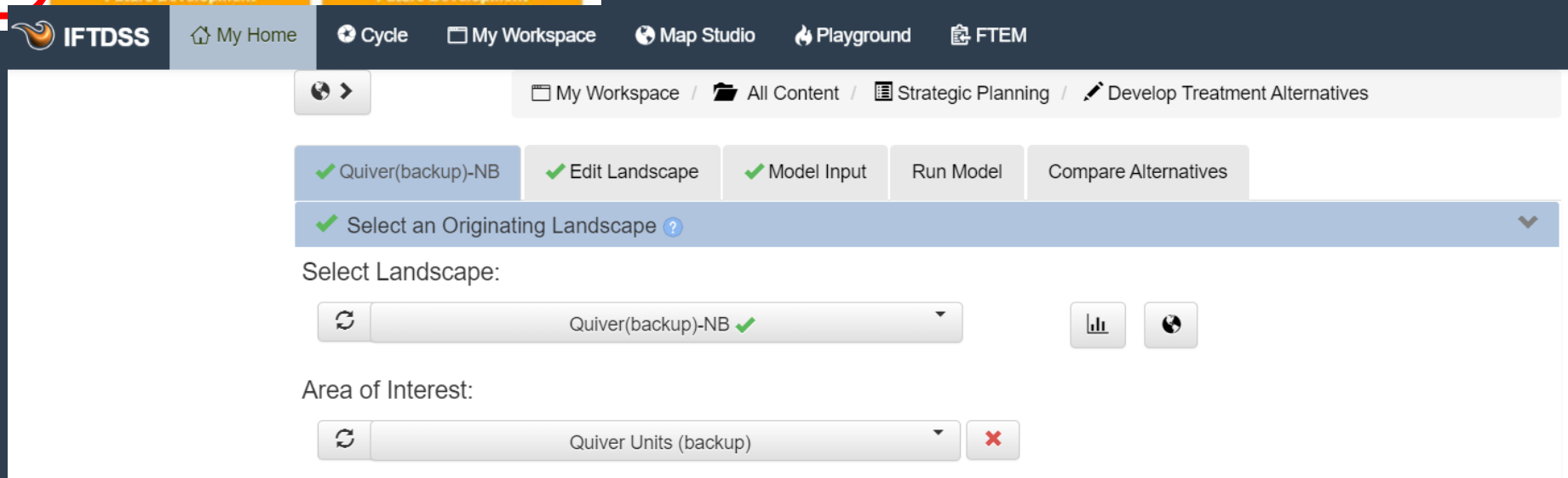


# What can IFTDSS do now?

## Develop and Compare Treatment Scenarios



The screenshot shows the IFTDSS Strategic Planning dashboard. On the left is a circular navigation menu with five segments: Landscape Evaluation, Strategic Planning, Implementation Planning, Monitoring, and Reporting. The 'Strategic Planning' segment is highlighted with a red circle. The main content area is titled 'STRATEGIC PLANNING' and contains three cards: 'DEVELOP TREATMENT ALTERNATIVES' (highlighted with a red box), 'QUANTITATIVE RISK', and 'PRIORITIZE TREATMENTS'. The 'DEVELOP TREATMENT ALTERNATIVES' card includes a checkmark icon and the text 'Develop treatment alternatives and view comparative summaries'. Below the cards are two orange buttons labeled 'Future Development'. The top navigation bar includes 'My Home', 'Cycle', 'My Workspace', 'Map Studio', and 'Playground'.



This screenshot shows the workflow for 'Develop Treatment Alternatives'. The breadcrumb trail is 'My Workspace / All Content / Strategic Planning / Develop Treatment Alternatives'. The workflow consists of several steps: 'Quiver(backup)-NB', 'Edit Landscape', 'Model Input', 'Run Model', and 'Compare Alternatives'. The 'Quiver(backup)-NB' step is currently active and highlighted in blue. Below the workflow, there are two dropdown menus for selecting landscape and area of interest. The 'Select Landscape:' dropdown is set to 'Quiver(backup)-NB' with a green checkmark. The 'Area of Interest:' dropdown is set to 'Quiver Units (backup)'. There are also icons for a bar chart and a globe.

# Develop and Compare Treatment Scenarios

The screenshot displays the IFTDSS web application interface. On the left, a 'Layer List' panel is open, showing several layers: 'Landscape: Alt 2 Fuel Reduct (back up)-NB' (checked), 'Landscape Extent (non buffered)' (checked), 'Elevation (feet)', 'Slope (degrees)', 'Aspect (degrees)', and 'Fuel Model' (checked). Below the 'Fuel Model' layer, a legend lists eight fuel types: FBFM1 (yellow), FBFM2 (cyan), FBFM3 (orange), FBFM4 (dark red), FBFM5 (brown), FBFM6 (maroon), FBFM7 (tan), and FBFM8 (blue). The map in the center shows a landscape with a cyan-colored area representing the fuel model. On the right, a configuration panel titled 'Develop Treatment Alternatives' is visible. It includes buttons for 'Quiver(backup)-NB', 'Edit', 'Input', 'Run', and 'Compare'. Below these, there is a section for 'Edit Landscape' with a dropdown menu set to 'Alt 2 Fuel Reduct (back up)...'. There are also sections for 'Treatment Edit Rule' and 'User Edit Rule', and a section for 'Add Default Fuels Treatment / Disturbance Edit Rule'. This section is circled in red and contains options for 'Select Treatment / Disturbance Type\*' (Thin: Slash Removed, Thin: Slash Remains, Clear Cut, Wildland Fire) and 'Select Time Since Treatment / Disturbance\*' (1 Year, 2 to 5 Years, 5 to 10 Years). At the bottom of the configuration panel, there are buttons for 'Add to Rules' and 'Cancel'.

# Develop and Compare Treatment Scenarios

Search Location

Layer List

- Landscape Fire Behavior Change: Alt 2 Fuel Reduct (back up) Quiver(backup)
- Landscape Extent (non buffered)
- Flame Length Change (feet)

Legend for Flame Length Change (feet):

- >25
- 11 to 25
- 8 to 11
- 4 to 8
- 1 to 4
- 0 to 1
- 0
- 1 to 0
- 4 to -1
- 8 to -4
- 11 to -8
- 25 to -11
- <-25

Map Studio: Develop Treatment Alternatives

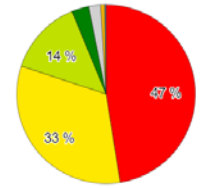
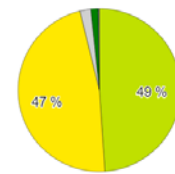
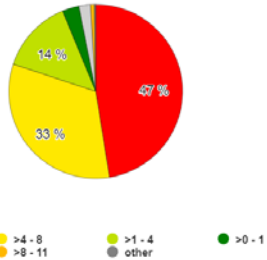
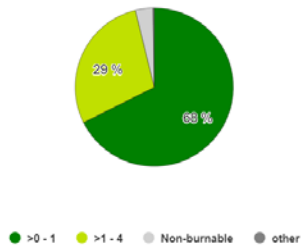
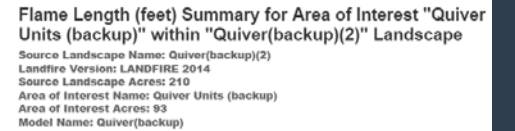
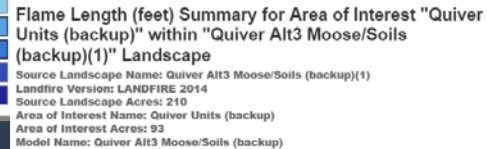
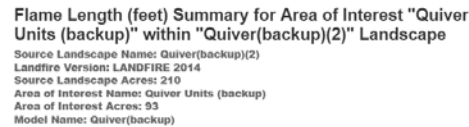
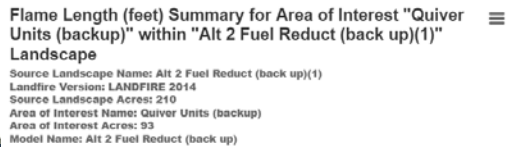
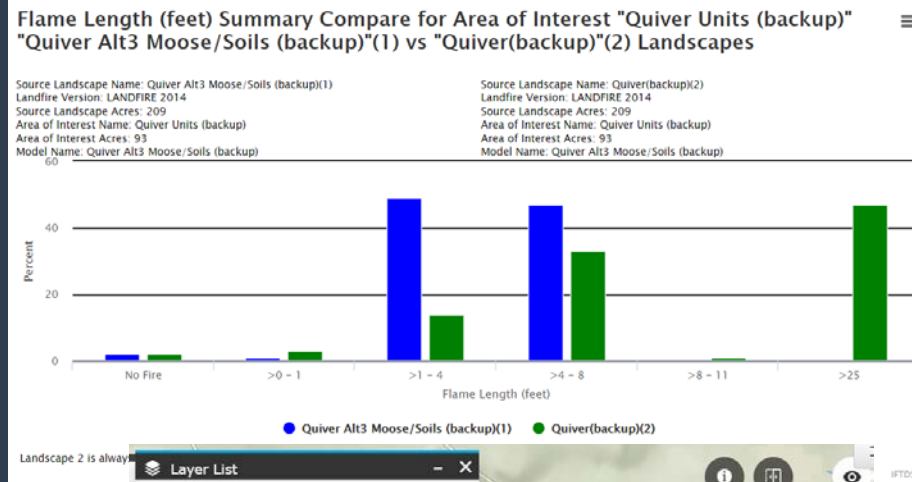
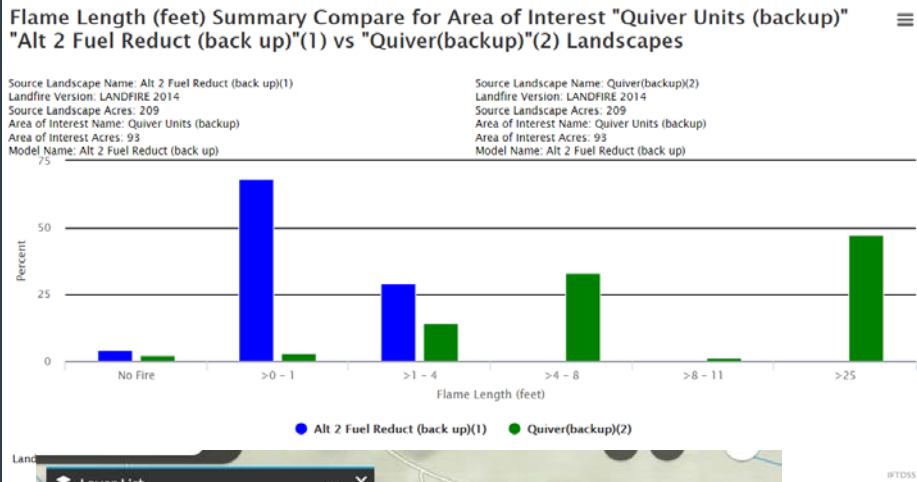
Buttons: Quiver(backup)-NB, Edit, Input, Run, Compare

Landscape	Model Run	Status
<input checked="" type="checkbox"/> 2 Quiver(backup)-NB	Quiver(backup)	Completed
<input type="checkbox"/> Quiver Alt3 Moose/Soils (backup)-NB	Quiver Alt3 Moose/Soils (backup)	Completed
<input checked="" type="checkbox"/> 1 Alt 2 Fuel Reduct (back up)-NB	Alt 2 Fuel Reduct (back up)	Completed
<input type="checkbox"/> Quiver(backup) edit test-NB		

Buttons: Compare on Map, Compare in Summary Report



# Develop and Compare Treatment Scenarios



# What can IFTDSS do now?

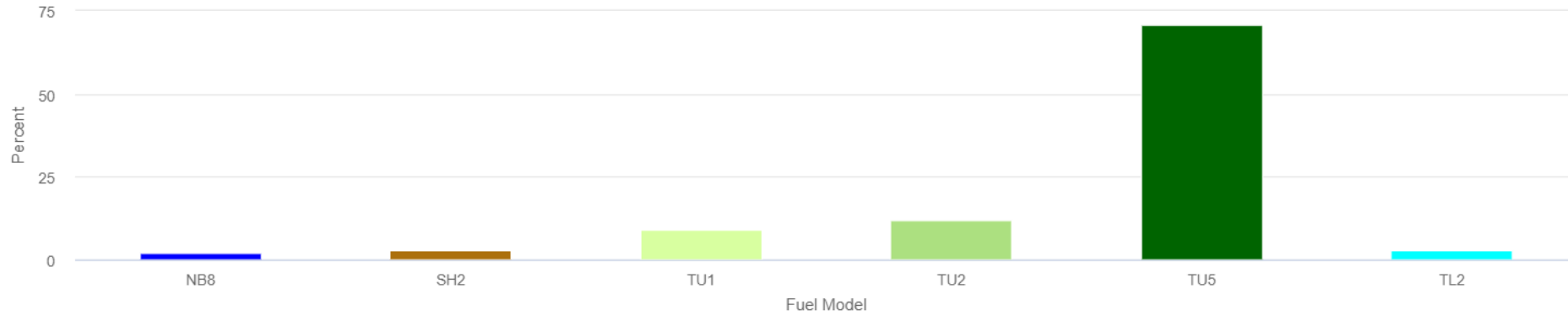
## Aid in Prescribed Fire Planning

- Used to describe fire area and assess Fire Behavior Fuel Models (spatial/tabular)
- Run and compare a variety of prescription parameters and view differences in reports and spatially on the map
- Use Landscape Fire Behavior outputs to create/validate the ignition, holding, contingency plans

# Describe fire area and view fuel models on maps

## Fuel Model Data Summary for Area of Interest "Quiver Units" within "Quiver Landscape" Landscape

Source Landscape Name: Quiver Landscape  
 Landfire Version: LANDFIRE 2014  
 Source Landscape Acres: 210  
 Area of Interest Name: Quiver Units  
 Area of Interest Acres: 94  
 Distribution under 1% not shown

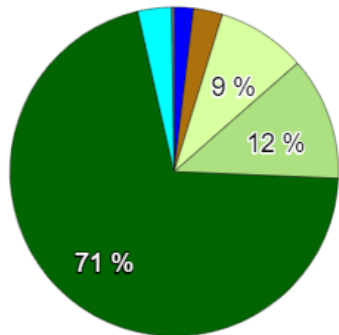


IFTDSS



### Legend

- Unbuffered Extent
- Area of Interest
- Fuel Models
- NB 1
- NB 8
- GR 3
- GR 5
- GR 6
- GS 1
- SH 2
- TU 1
- TU 2
- TU 5
- TL 2
- TL 6



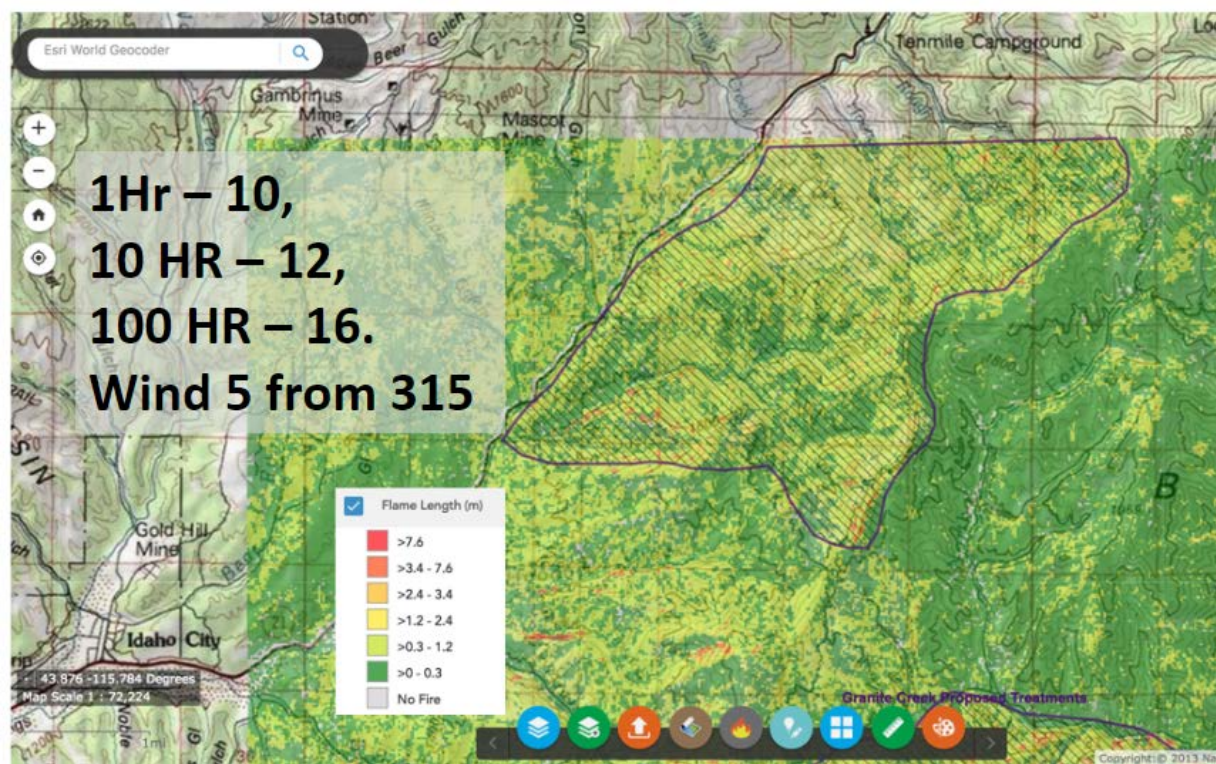
● NB8 ● SH2 ● TU1 ● TU2 ● TU5 ● TL2 ● other



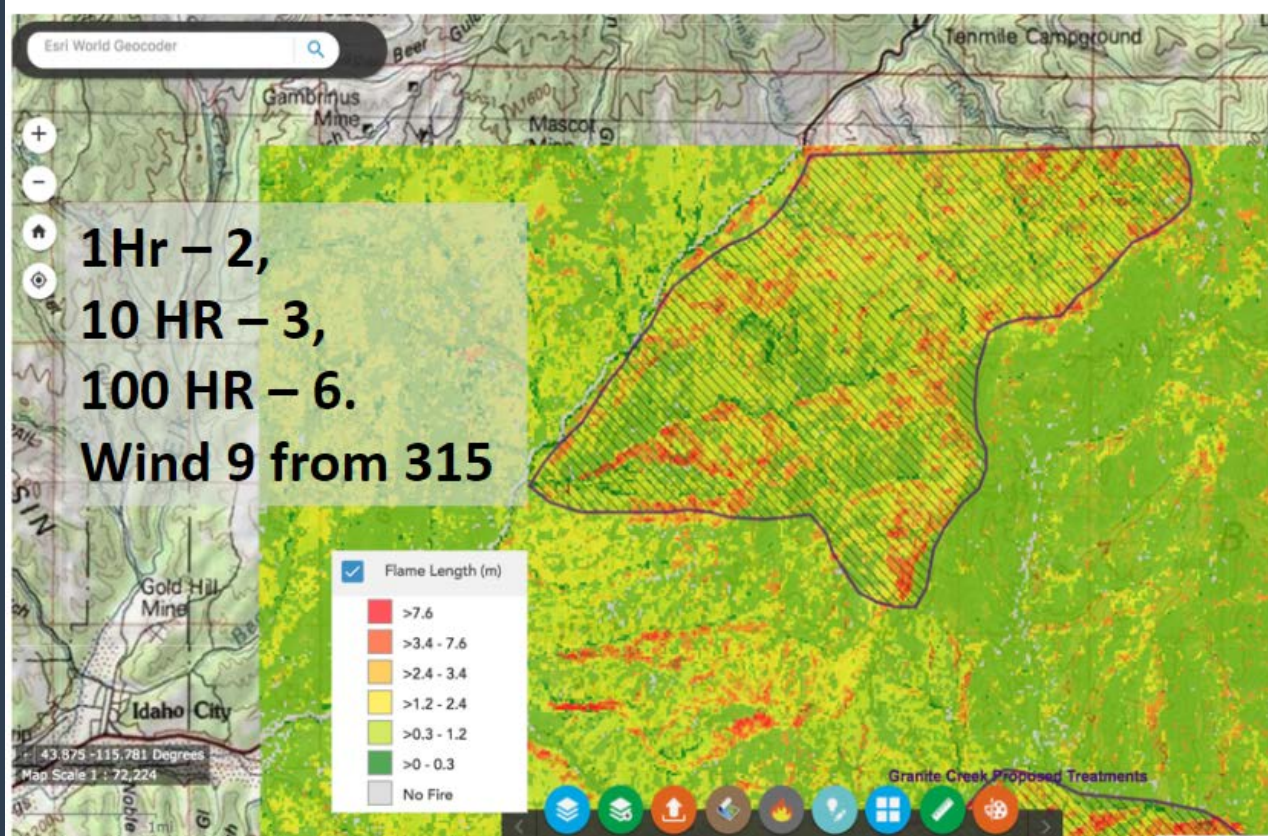


# Compare a variety of Prescription Parameters

## LOW END RX



## HIGH END RX





# Compare a variety of Prescription Parameters

## Flame Length (feet) Data Summary for Area of Interest "Granite Creek Proposed Treatments" within "Granite Creek LF2012 unedited" Landscape

Source Landscape Name: Granite Creek LF2012 unedited  
 Landfire Version: LANDFIRE 2012 1.3.0  
 Source Landscape Acres: 58,701  
 Area of Interest Name: Granite Creek Proposed Treatments  
 Area of Interest Acres: 10,386  
 Model Name: Granite Low RX

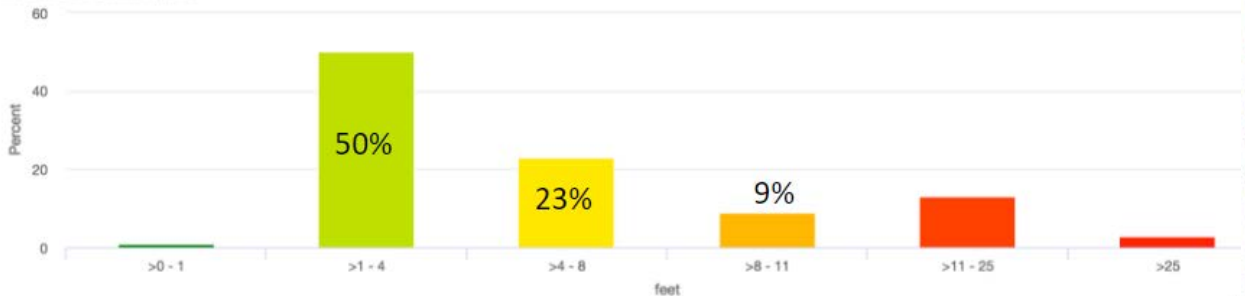
### LOW END RX



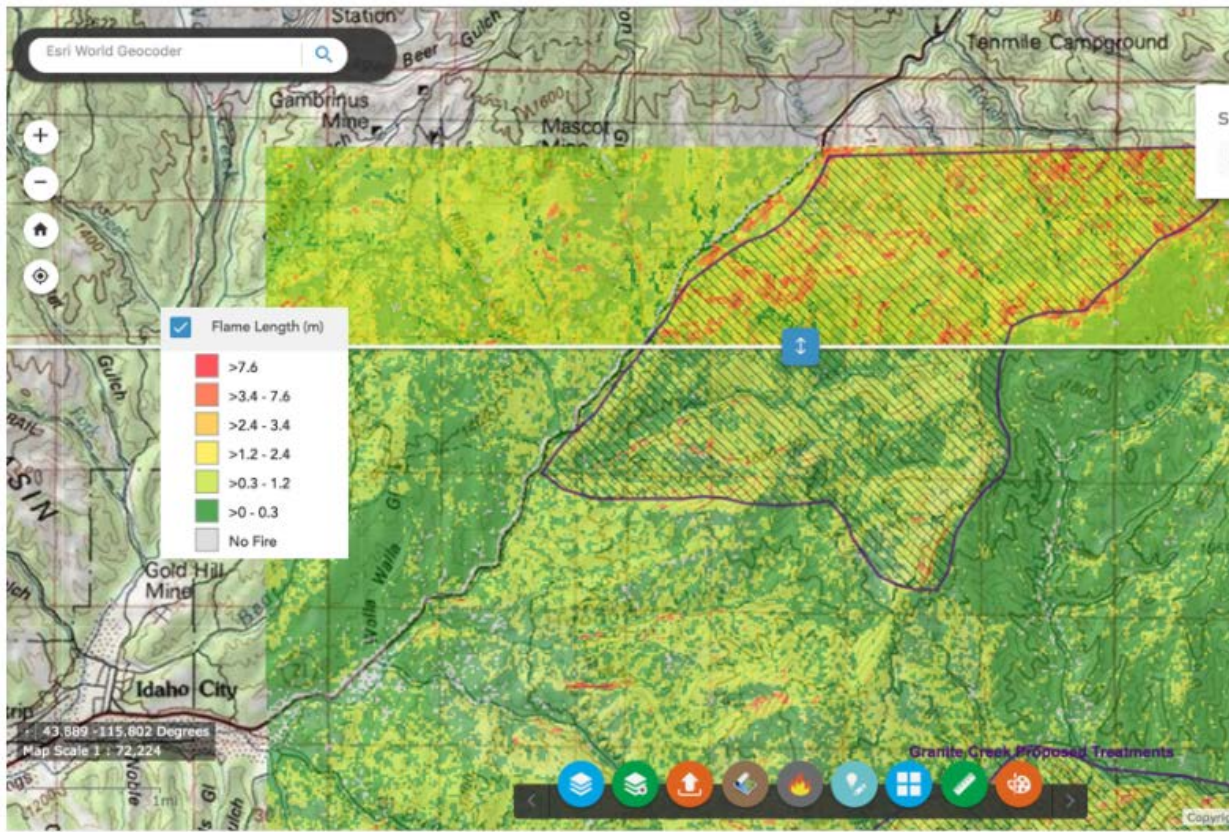
## Flame Length (feet) Data Summary for Area of Interest "Granite Creek Proposed Treatments" within "Granite Creek LF2012 unedited" Landscape

Source Landscape Name: Granite Creek LF2012 unedited  
 Landfire Version: LANDFIRE 2012 1.3.0  
 Source Landscape Acres: 58,701  
 Area of Interest Name: Granite Creek Proposed Treatments  
 Area of Interest Acres: 10,386  
 Model Name: Granite High RX

### HIGH END RX



## Compare Low RX to High RX

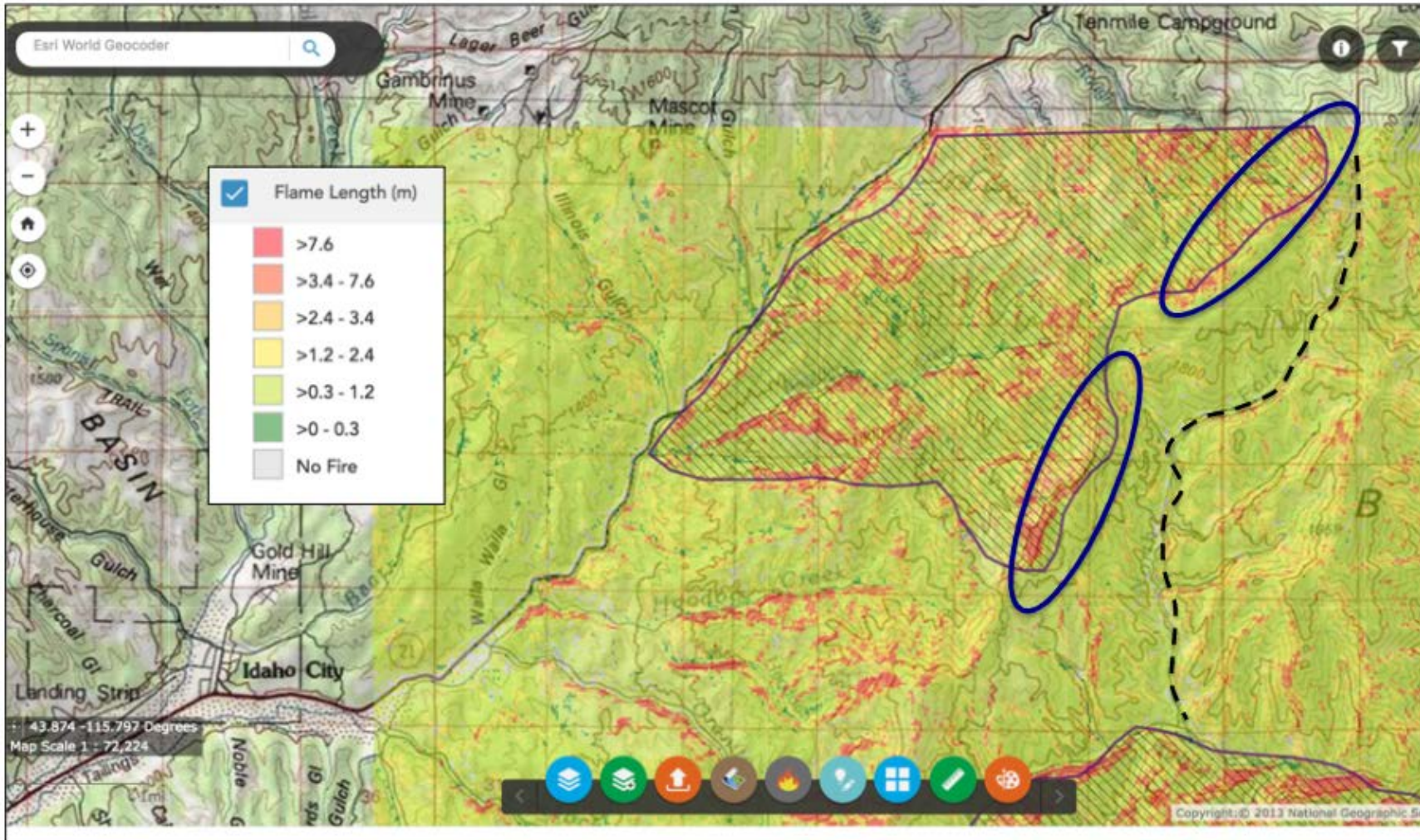




# Use in creating/validating holding, ignition, contingency plans

## HOLDING PLAN

**Scenario:** Biologist wants burn unit boundary to be located along ridge in blue circles, as the burn boss and burn plan preparer writing the holding plan, you would like to propose the drainage/trail along the dotted line – lower flame lengths, fireline intensity etc.





# What can IFTDSS do now?

## Fuel Treatment Effectiveness Monitoring

**Welcome to FTEM**  
Fuels Treatment Effectiveness Monitoring

[FTEM Monitoring](#)
[FTEM Reports](#)
[FTEM Account Management](#)
[Back to IFTDSS](#)

### Use FTEM To:

- Verify and record the effect of fuels treatments for Agencies, Congress, and the Public
- Identify the extent to which hazardous fuels treatments affect the wildland fire environment
- Document when and how a fuel treatment contributed to mitigating wildfire behavior or assisting in managing wildfire
- Contribute to an interagency, web-based hub to document the occurrence of wildfire and fuel treatment interactions

**Read Help Topics**

Find detailed information about FTEM and how to use it.

[FTEM Help Page](#)

**Contact Agency Leads**

See a list of current FTEM Agency Leads along with contact information.

[Contact Info](#)

**Read Agency Guidance**

Read agency-specific guidance, find FTEM Administrator contacts

[More Guidance](#)

**2014 Loblolly Release**

**Treatment List:**

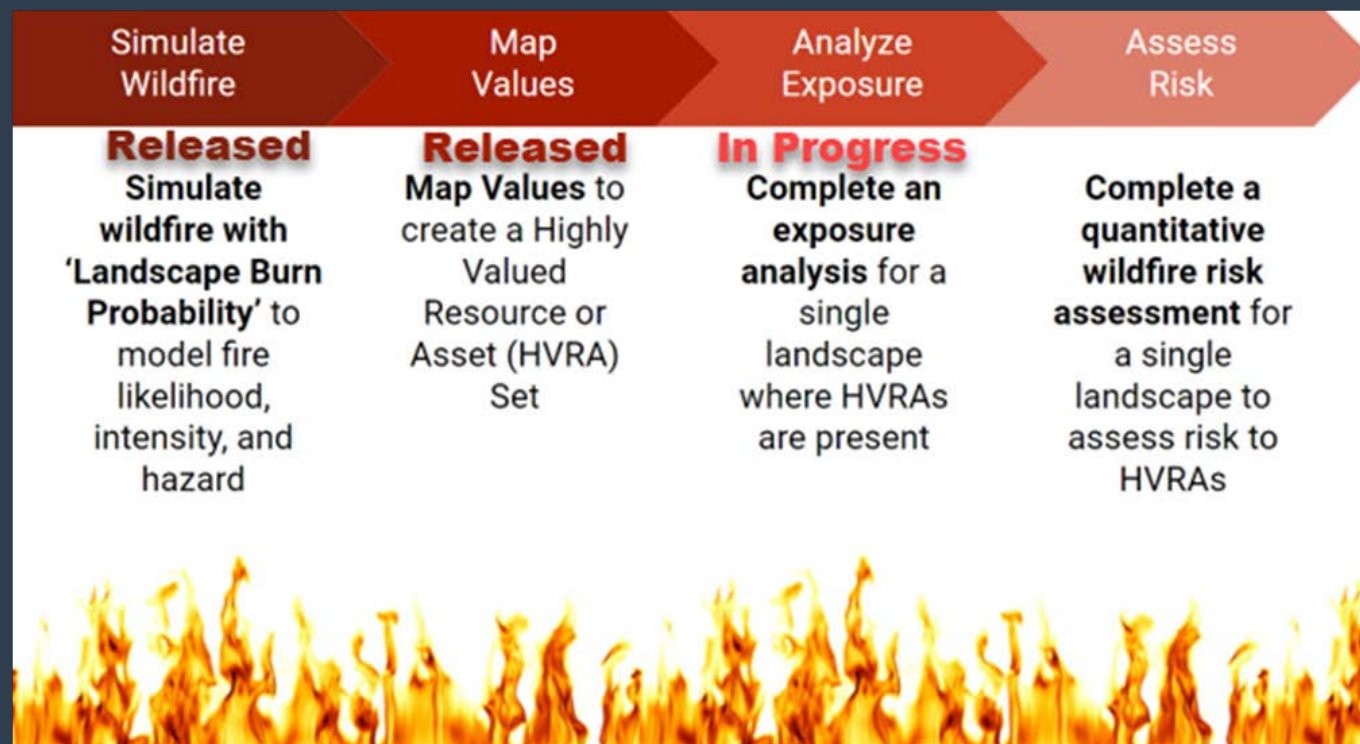
Treatment Name	Treatment ID	Type	Compl	Ac	Agen
HOLMES CHAPEL SL ONLY	1110021000	Broadcast Burning - Covers a majority of the unit	Feb 4, 2017	172	USFS
WELL WOMAN	1110021001	Broadcast Burning - Covers a majority of the unit	Apr 24, 2015	457	USFS
SHORTLEAF	0000021001	Tree Release and Weed	Apr 24, 2015	98	USFS
HOLMES CHAPEL	1110021000	Broadcast Burning - Covers a majority of	Apr 24, 2015	793	USFS

Interactions count: 5

# What will IFTDSS do next?

## Quantitative Wildfire Risk Assessment

- Wildfire simulation with “Landscape Burn Probability”
- Highly Valued Resources or Assets (HVRA characterization)
- Analyze exposure to HVRAs (coming very soon)
- Complete a Quantitative Wildfire Risk Assessment-assess threats and benefits to HVRAs



# What will IFTDSS do next?

## Exposure Analysis reports

MODEL CHARACTERISTICS  
Landscape Burn Probability

PRIMARY HVRA CATEGORY  
Primary HVRA Summary

SUB-HVRA BY PRIMARY HVRA CATEGORY

Primary HVRA: Human Habitation

Primary HVRA: Ecosystem Function

Primary HVRA: Recreation Infrastructure

**Primary HVRA: Timber**

Primary HVRA: Communication Infra

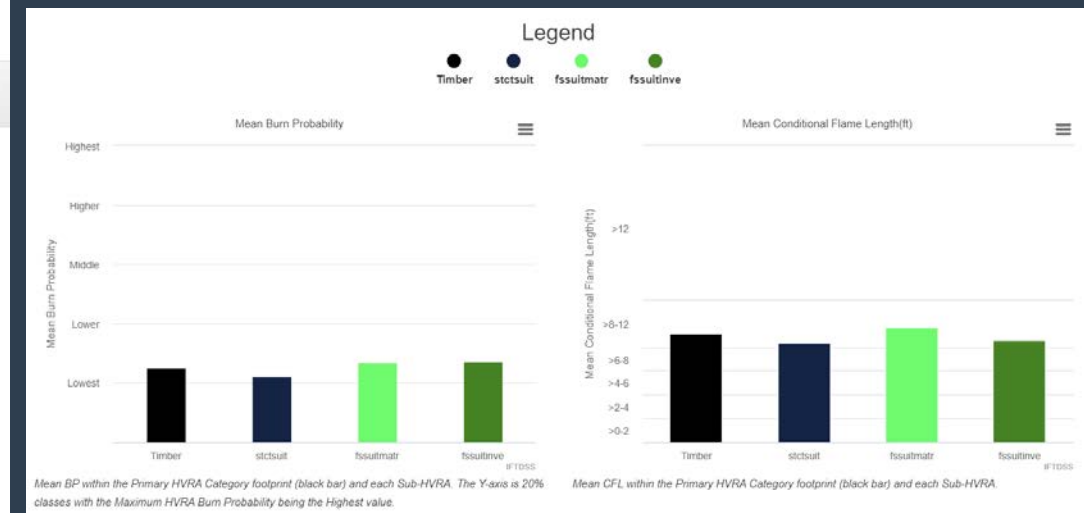
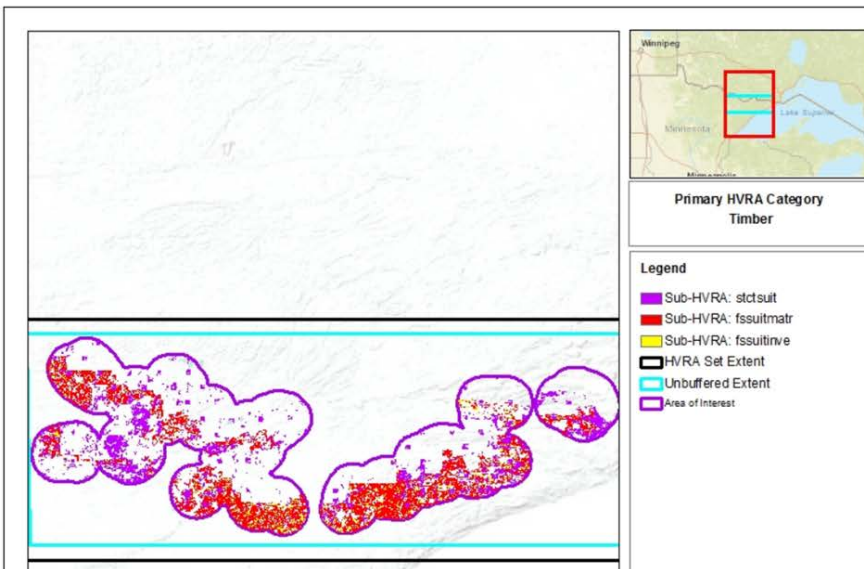
Primary HVRA: Priority Vegetation

Primary HVRA: Critical Habitat

SUMMARY STATISTICS TABLE  
HVRA Summary Statistics

### Primary HVRA: Timber

Map

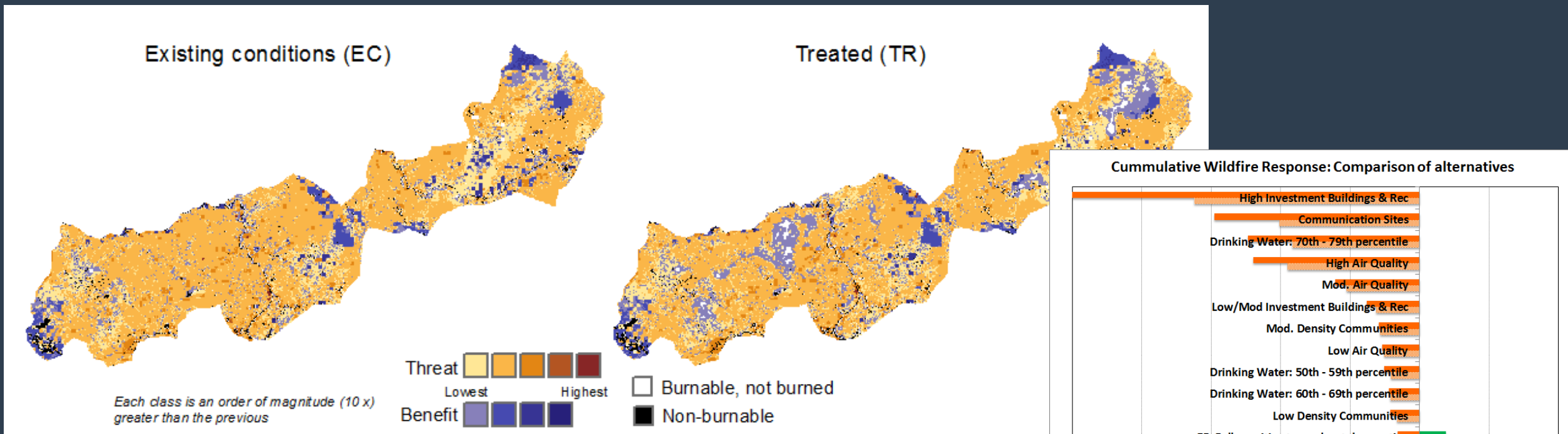


Primary HVRA Category	Sub-HVRA Name	Sub-HVRA Short Name	Relative Extent (ac)	Expected Area Burned (ac)	Mean Burn Probability	Mean Conditional Flame Length (ft)	Mean Integrated Hazard Class
Timber			451,056	316	0.0007	9.13	middle
	timber_statecountysuitable	stctsuit	167,661	104	0.00062	8.37	middle
	timber_usfssuitablematrix_clippedwfr	fssuitmatr	255,889	192	0.00075	9.68	middle
	timber_fssuitableinvested	fssuitinve	27,506	21	0.00076	8.59	middle

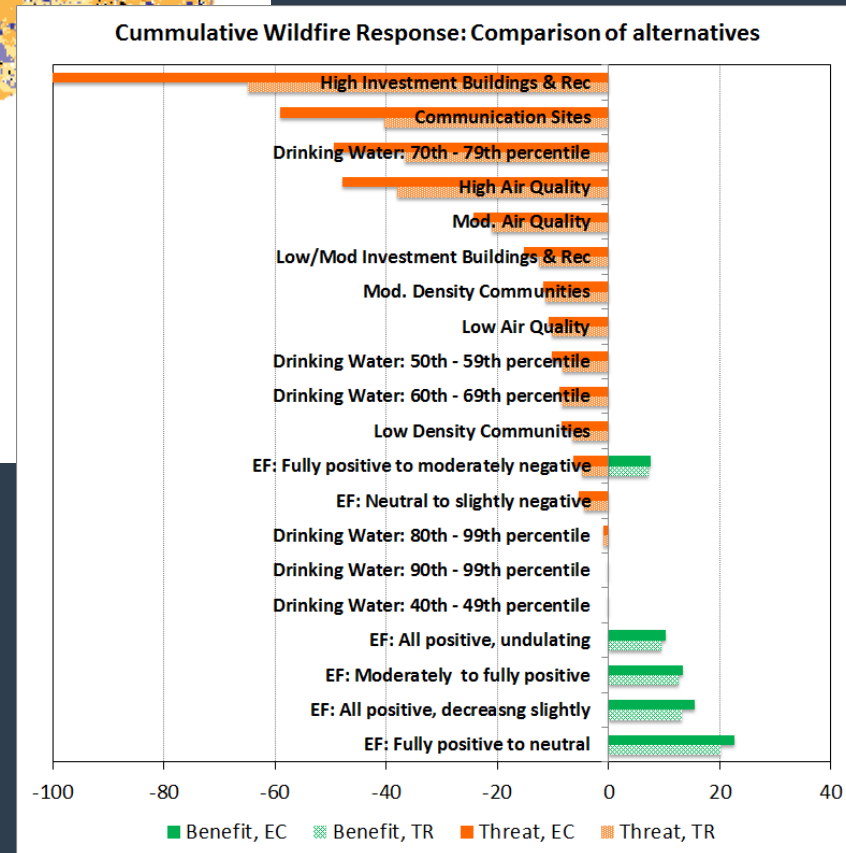


# What will IFTDSS do next?

## Quantitative Wildfire Risk Assessment



- User defined response functions (RF)
- User defined relative importance (RI)
- Net Benefit/Net Threat Graphics



# What will IFTDSS do after Risk???

- Comparison Dashboard
- Fire spread model (MTT)
- Collaboration/Sharing
- ?????

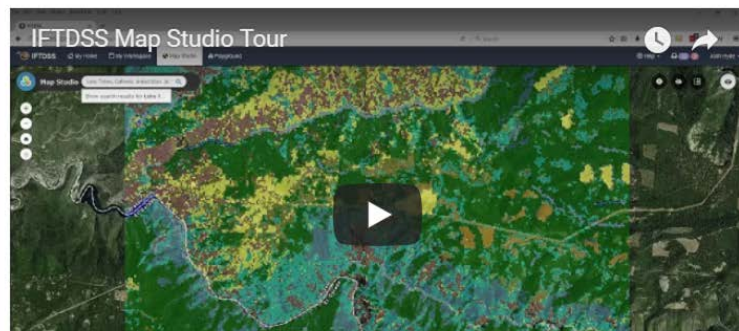


# How can I learn more about IFTDSS?

- Get Started
- My Workspace
- Cycle
- Modeling
- Mapping
- Working in Map Studio**
- Map Functions
- Using Landscapes
- Using Shapes and Shapefiles
- Reference Layers
- Use My Own Data
- MapStudioTips and Tricks

You are here: Mapping > Working in Map Studio

## Working in Map Studio



## Wildland Fire Learning Portal

Home Record of Learning Find Learning National Training Centers Geographic Areas Help

Home / My courses / IFTDSS Overview 2020

### IFTDSS OVERVIEW

- Participants
- Badges
- Grades
- General
- Start Here
- Introduction and Navigation
- Create a Landscape
- Generate an Automatic 97th Percentile Landscape Fi...
- Create Shapes and Upload Shapefiles for Areas of I...
- Make Edits to the Landscape
- Run Fire Behavior from Playground (Comparing pre &...
- Wrap-Up

## IFTDSS Overview 2020

Announcements

### Start Here

- Course Introduction
- How to view videos in new tabs
- Set up an IFTDSS Account

### Introduction and Navigation

- Presentation - Navigating IFTDSS (5 min.)

## Welcome to the IFTDSS Help Center

### Quick Links



## IFTDSS Support System

Home

Forums

### How can we help you today?

Enter your search term here...

SEARCH

## Community forums

Start a new topic

### IFTDSS

Questions & Answers Forum (21)

Welcome to the IFTDSS Q&A Forum!

Posted by IFTDSS Support Team, 2 years ago

FTEM - Documenting suppression benefits of ...

Posted by Jeff Crawford, 15 days ago ,  
Last Reply by Josh 15 days ago

Ideas Exchange (19)

Welcome to the Ideas Exchange

Posted by IFTDSS Support Team, 2 years ago

Is there training available for IFTDSS?

Posted by Annie Benoit, a year ago ,  
Last Reply by Josh 4 months ago