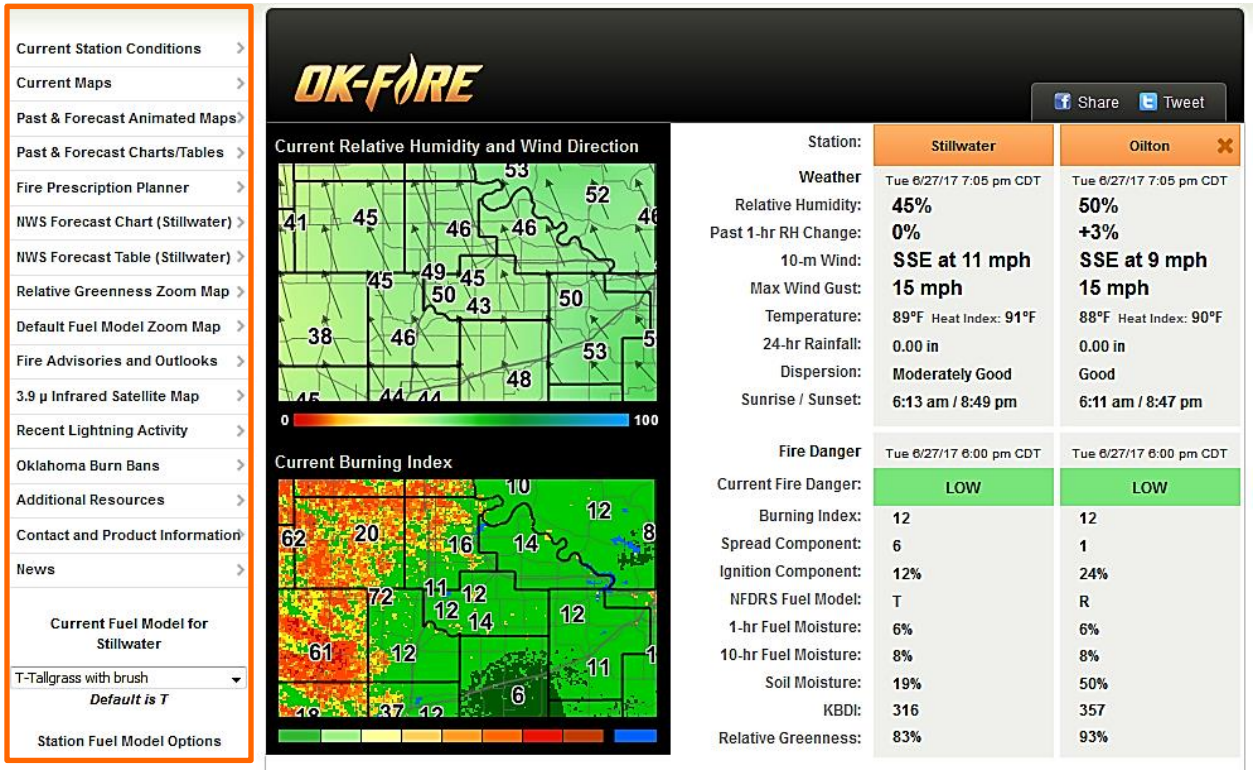
Overview of Left Menu Items on the New OK-FIRE

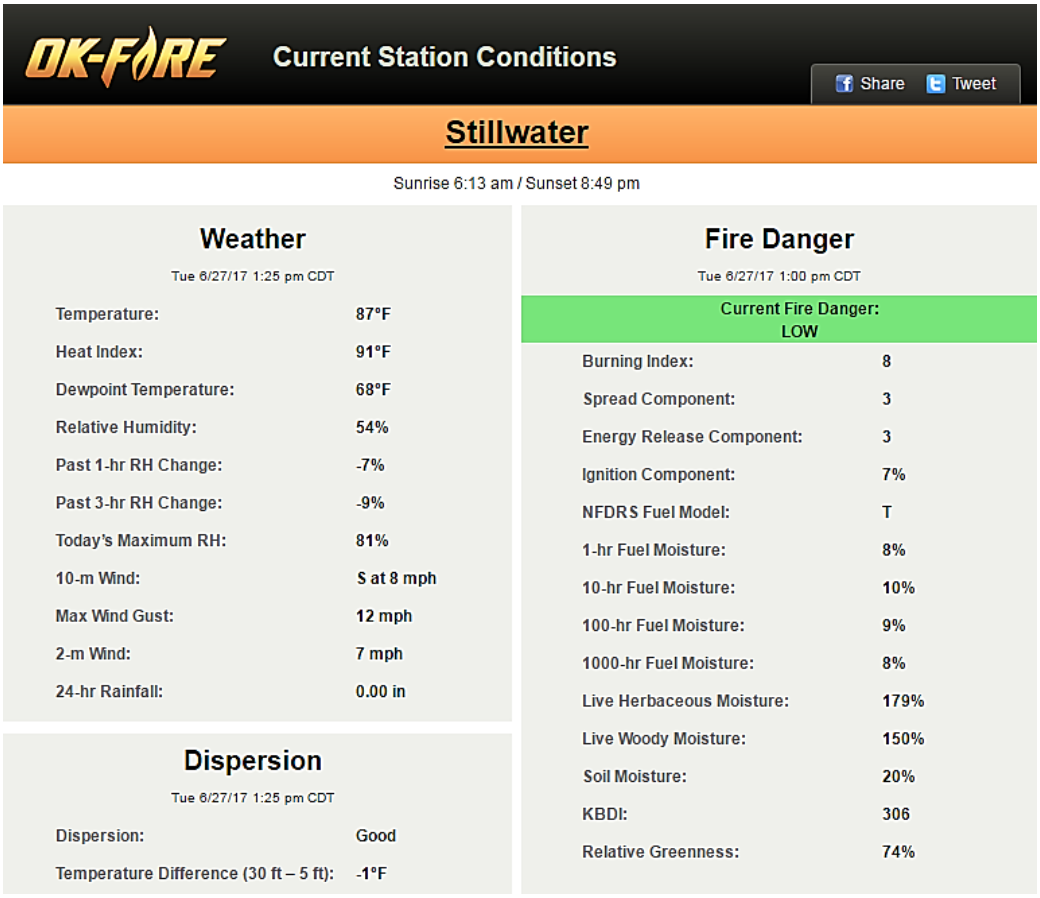
In contrast to the current OK-FIRE (http://okfire.mesonet.org), in the new OK-FIRE there are only LEFT menu items (located within the orange rectangle added in this document). We put the items that are the most important and most commonly used, to allow for easy access by the user. And there are no submenus when you enter these sections!



Following is an overview of the sections represented by these left menu links.

Current Station Conditions

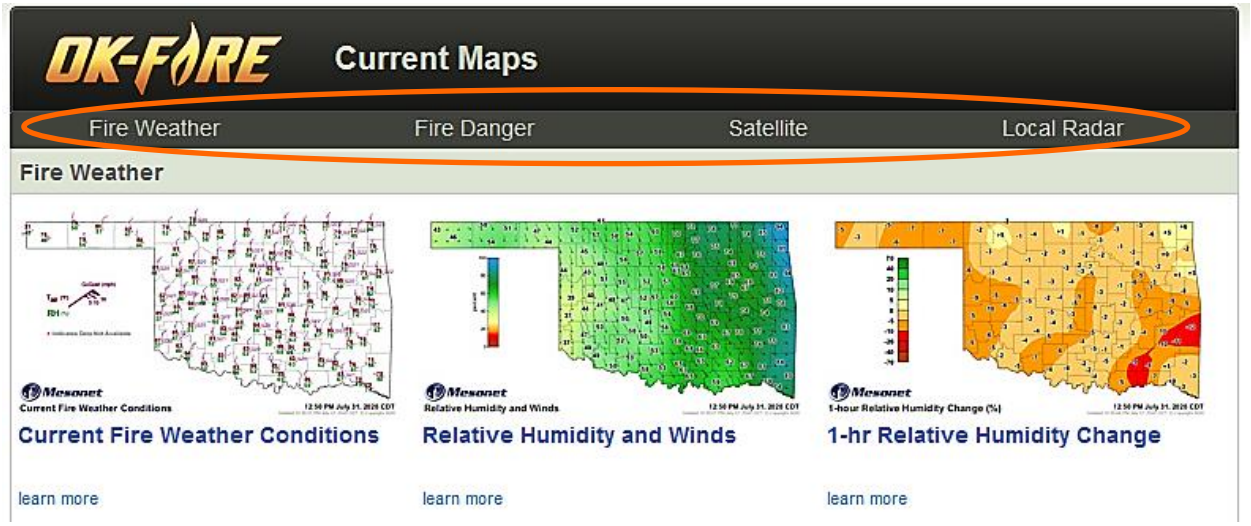
On the home page data tables, there is not space to list all the various fire weather and fire danger variables for the one or two selected stations and we chose to show those variables we deemed most important for wildland fire management. If the OK-FIRE user would like to see the current values for all the available variables for a given station, that is what the Current Station Conditions section provides. The default station on this page is the PRIMARY Mesonet station on the home page, but the user can select any station desired by clicking on the station name at the top of the tables and selecting another. This will NOT change the primary or secondary stations shown on the home page.



Similar to the home page data tables, one can click on the variable name to get to a statewide map for that particular variable.

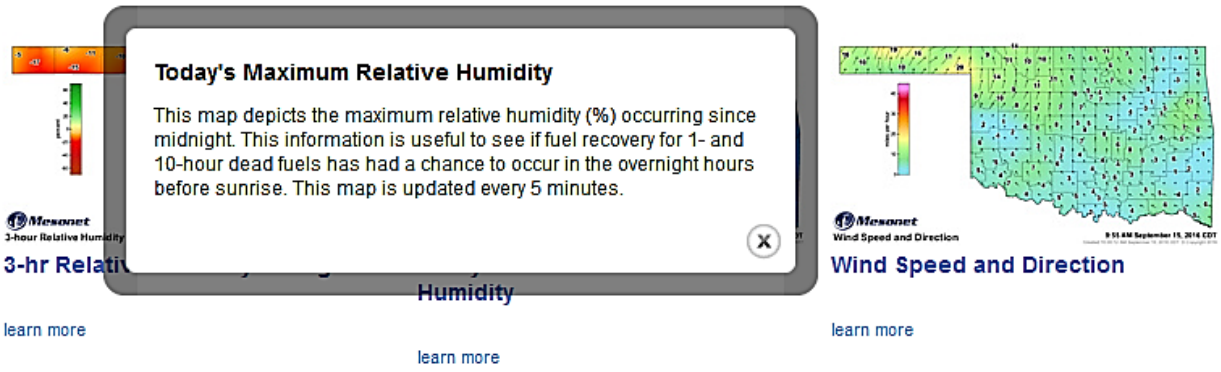
Current Maps

This section of the website features most of the current maps deemed relevant to wildland fire management and is divided into four sections: Fire Weather, Fire Danger, Satellite, and Local Radar.

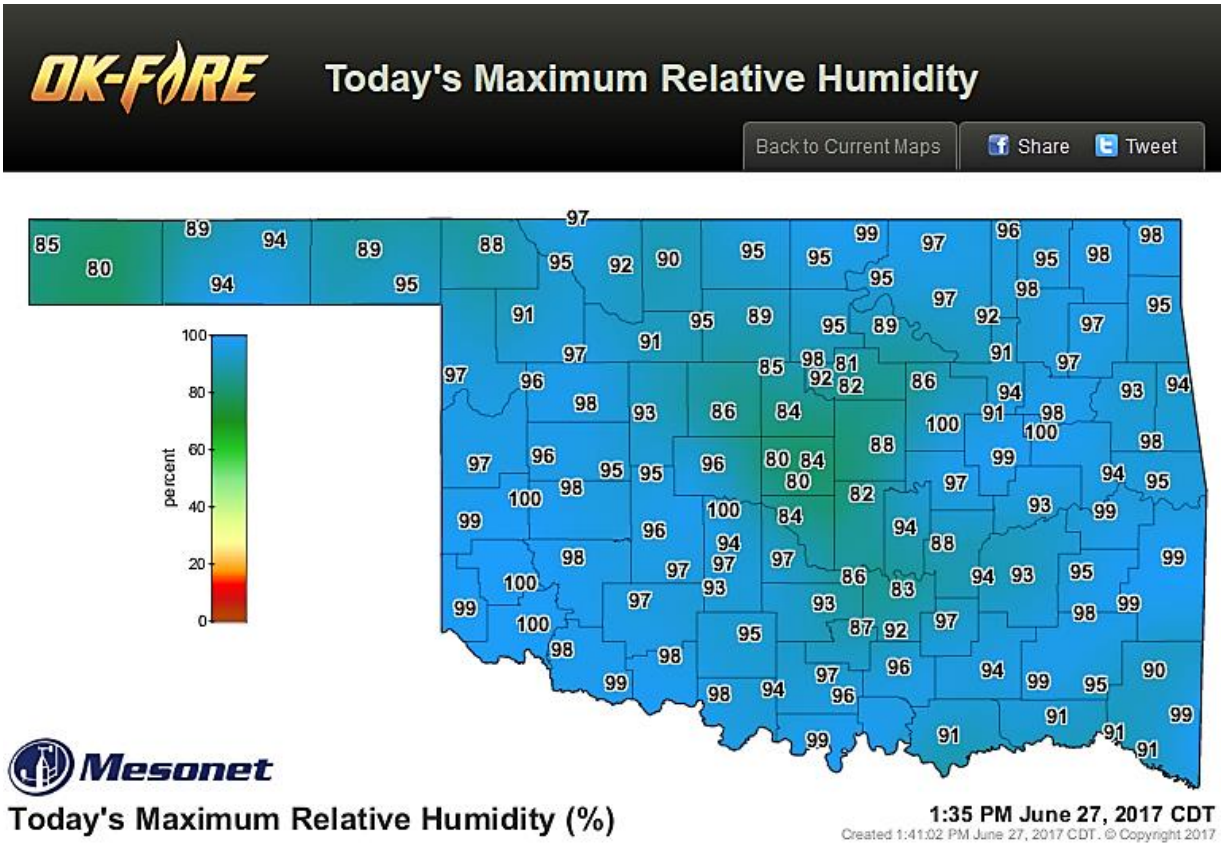


One can click on any of these subheaders (encircled in orange) at the top and the user will be taken directly to that section of current maps (e.g, Satellite).

In addition, the “learn more” links under each map provide a description of that map and, if not obvious, why that map is valuable to wildland fire management. For example here is the description for the “Today’s Maximum Relative Humidity” map:



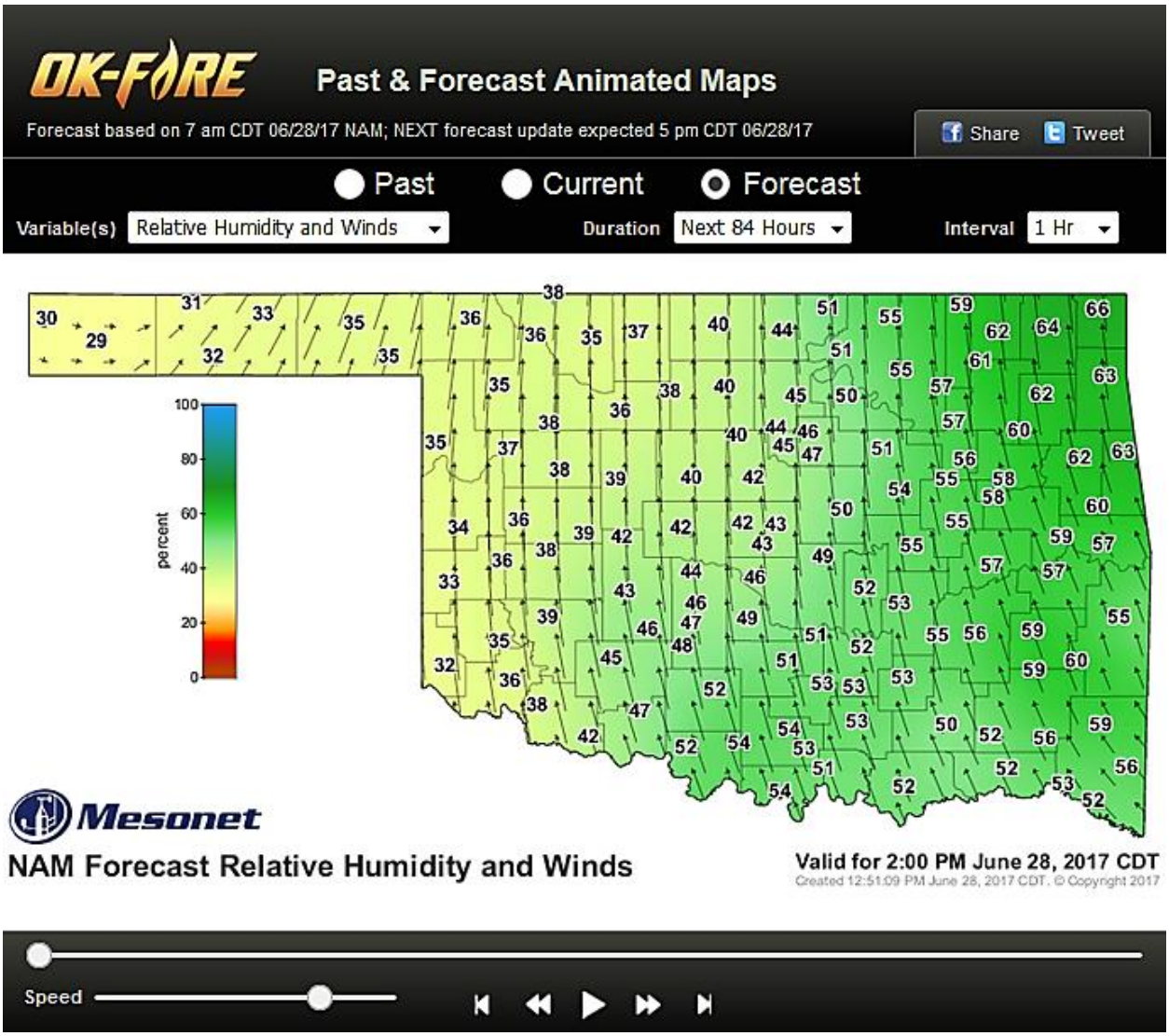
This description also appears underneath the map when you click on it to activate it:



This map depicts the maximum relative humidity (%) occurring since midnight. This information is useful to see if fuel recovery for 1- and 10-hour dead fuels has had a chance to occur in the overnight hours before sunrise. This map is updated every 5 minutes.

Past & Forecast Animated Maps

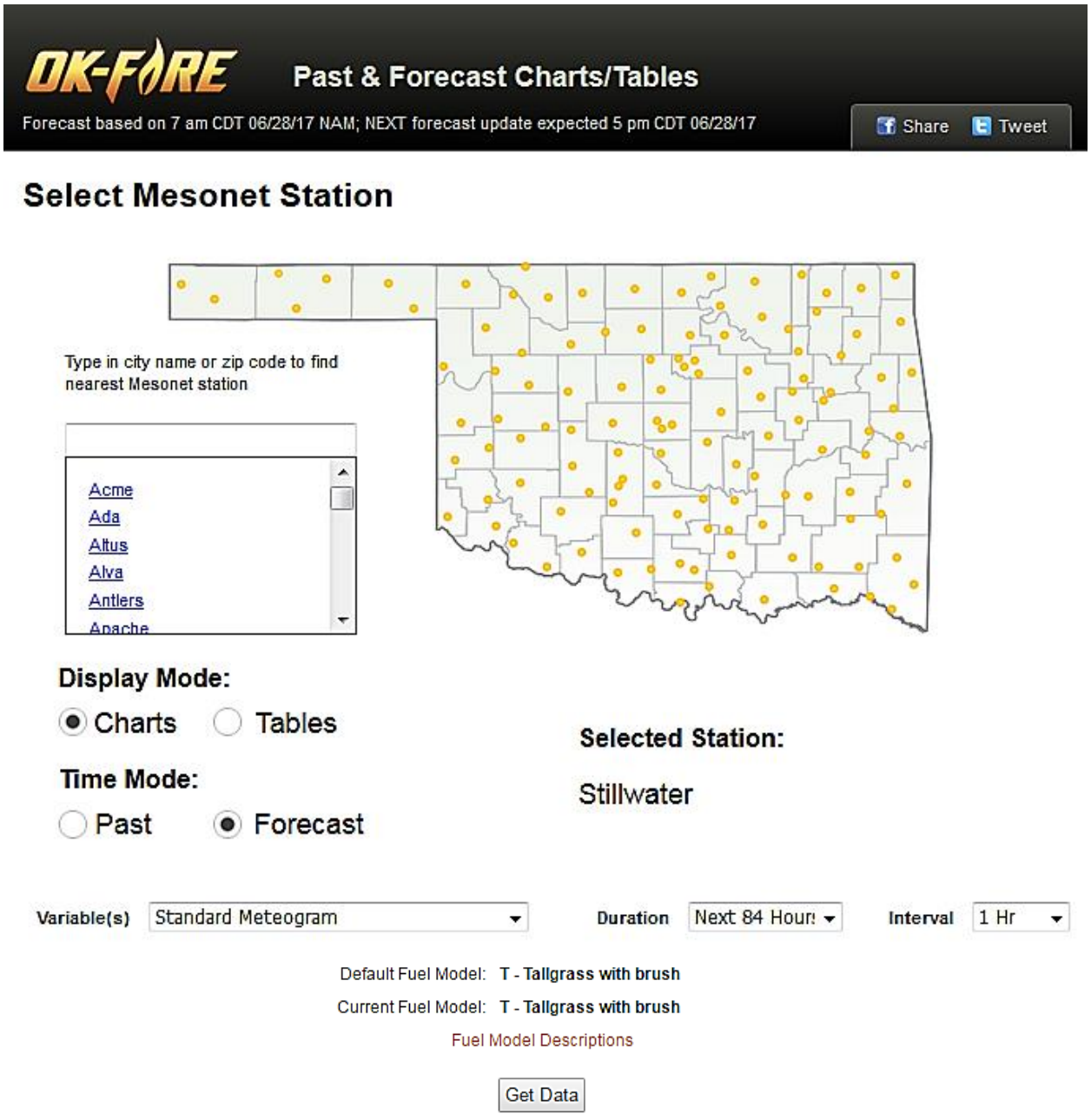
This section utilizes new technology to provide animation of maps, something that was done by the plug-in WeatherScope in the old OK-FIRE. Also, in contrast to the old OK-FIRE, all maps can be animated in this section (one doesn't have to go to the "Weather", "Fire", or "Smoke" sections) and all time periods (past and forecast) can be animated. So rather than having to go to up to 6 sections on the old OK-FIRE to animate past or forecast maps, one can do all of this on this ONE page.



More details on how this page operates can be found in the PDF document "Past & Forecast Animated Maps" in the "Contacts and Learning Tools" section of the new OK-FIRE site.

Past & Forecast Charts/Tables

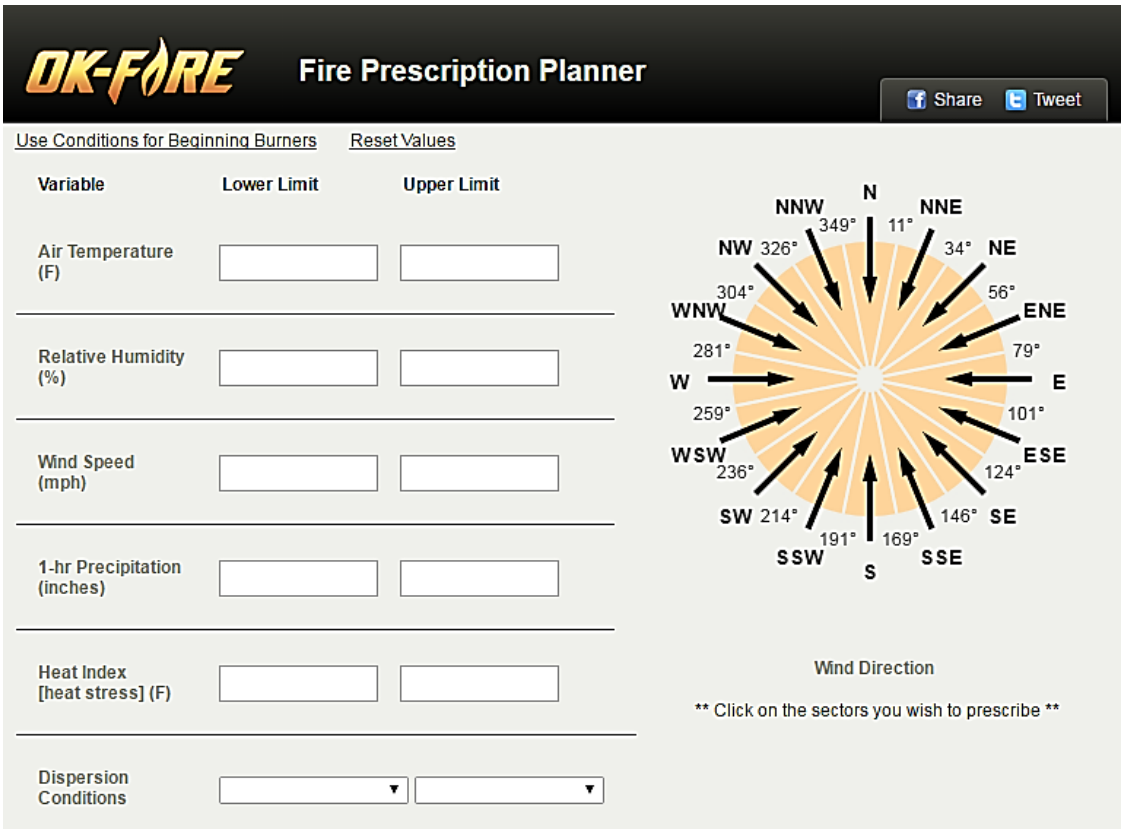
This section allows for the creation of charts and tables for a selected Mesonet station. Similar to the last page discussed on animated maps, this page is again much more user-friendly than the old OK-FIRE. In that architecture one had to go to the section related to the map in question ("Weather", "Fire", or "Smoke"), then choose the "RECENT" or "FORECAST" menu item under that section, and then choose either "Charts" or "Tables" in yet another menu item. This resulted in up to 12 different locations to which to navigate in order to access the product desired. In the new OK-FIRE the user can do all this on ONE page.



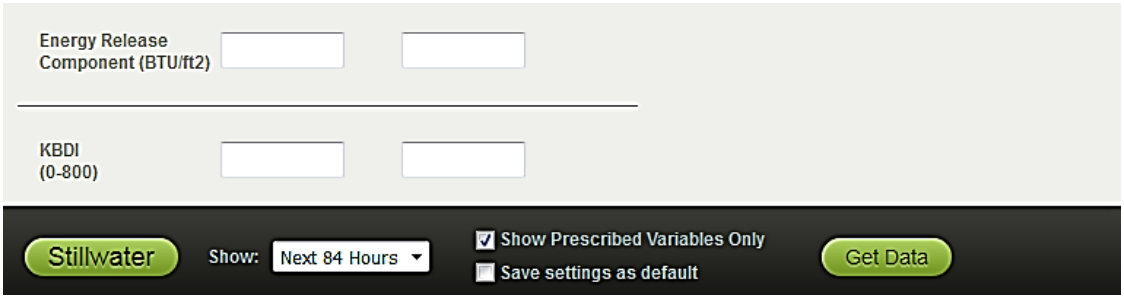
More details on how this page operates can be found in the PDF document "Past & Forecast Charts/Tables" in the "Contacts and Learning Tools" section of the new OK-FIRE site.

Fire Prescription Planner

The Fire Prescription Planner is essentially the same as in the old OK-FIRE so there should be little if any learning curve for this product. The only major difference is that the wind direction compass is divided into 16 sectors (rather than 8) and it is located in the upper right of the page rather than at the bottom. In addition, the "Use Conditions for Beginning Burners" and "Reset Values" are now at the top rather than the bottom.



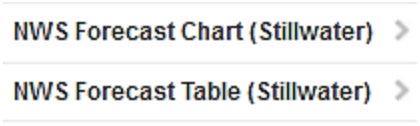
Also, rather than having an intermediate page where the user selects the Mesonet station, one can now do this at the bottom of the first page by clicking on the station name at the bottom left. In addition, there is an option to show (in the final forecast table) ONLY the prescribed variables.



A more detailed description of how to use the Fire Prescription Planner is provided in the PDF document "Fire Prescription Planner" in the "Contacts and Learning Tools" section of the OK-FIRE site.

NWS Forecast Chart/Table for PRIMARY Station

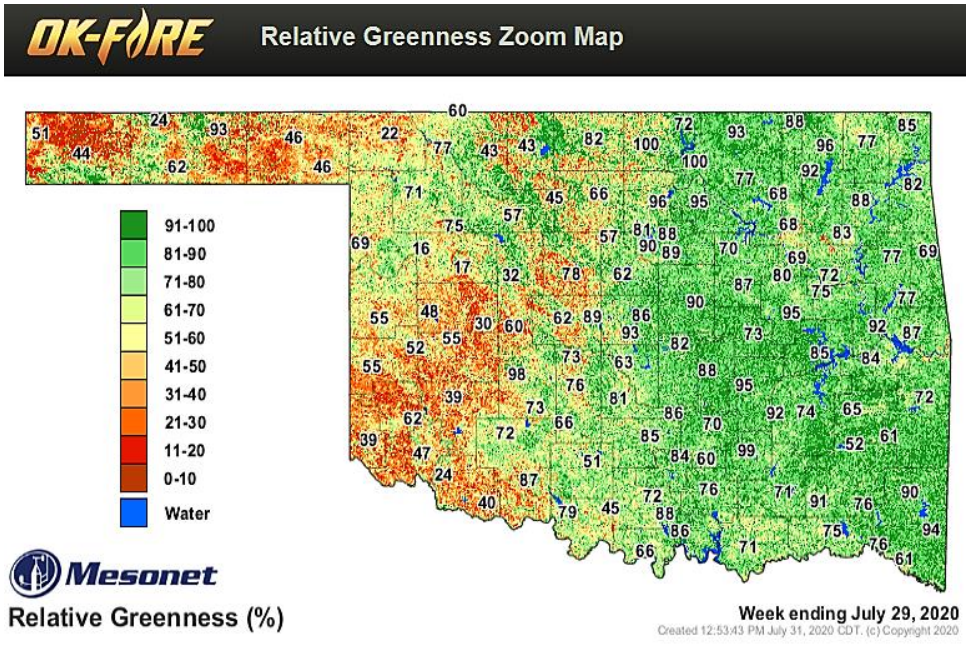
Since OK-FIRE utilizes a single numerical forecast model (NAM) for its products, it is always good to check the "official" National Weather Service (NWS) forecasts to see if there are any major discrepancies between the NAM forecast and theirs. In the old OK-FIRE one had to make four clicks to get to these NWS forecast products. In the new OK-FIRE, to allow for easier access to these NWS forecasts for the PRIMARY station, we have included two left menu links:



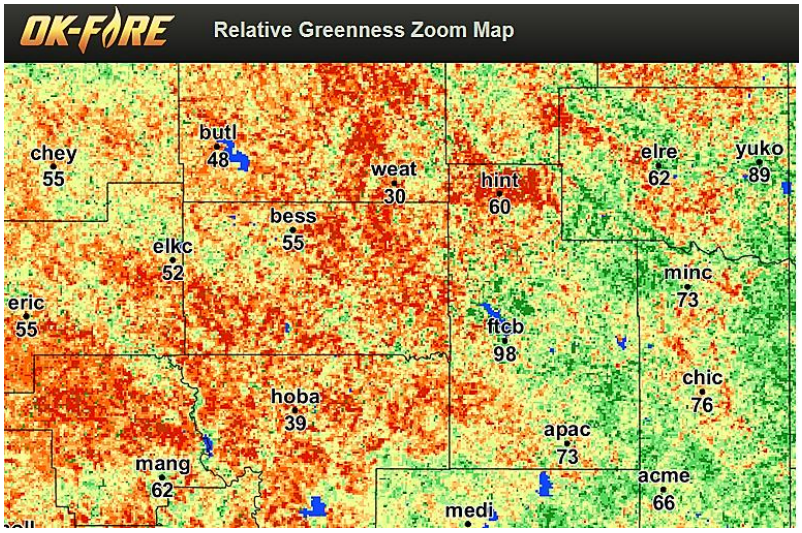
These forecast products will open up in a new tab, which you can close after looking at the forecast. It is beyond the scope of this overview to describe in detail how these forecasts can be navigated, but they are fairly user-friendly.

Relative Greenness Zoom Map

Relative Greenness (RG) is a key variable in the fire danger model. It is a satellite-derived variable from the MODIS sensor, has a spatial resolution of 500 m, and is updated daily. This is one of the KEY maps that the OK-FIRE user needs to master. As such, it is important that this map be zoomable. In the old OK-FIRE this was accomplished via WeatherScope, but in the new OK-FIRE newer technology is used.



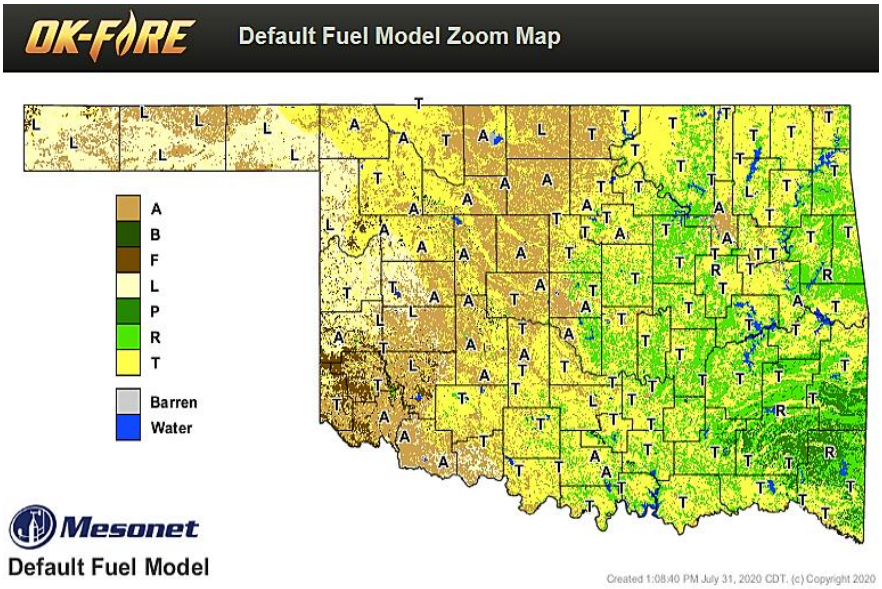
Upon clicking on this link, the statewide map of RG appears with RG values listed at the Mesonet stations. On a desktop or laptop computer, to zoom in, simply left click on the map. At that point you will then see a zoomed-in map centered in western Oklahoma.



On this map you will find the 4-character site names of the Mesonet stations. For desktop and laptop computers, to move to your part of the state, hold down your left mouse button and move your mouse toward the geographical area of interest. Release the mouse button and repeat to continue moving the map until you get where you wish. To zoom in further, move your scroll button forward; to zoom back out, move it backward. Finally to return to the statewide map, just left click on the existing zoomed-in map. For smartphones/tablets, just use the standard method of using your fingers to zoom in and out and to move the map around.

Default Fuel Model Zoom Map

Using the right fuel model for a given Mesonet site is essential for using the fire danger model output correctly. The statewide fire danger maps (i.e., BI, SC, ERC, and IC) are based on a DEFAULT fuel model map, with each 500-m pixel of land assigned a given fuel model. However, the user has the option at any Mesonet site to choose a different fuel model than the default one assigned to that station. Since fuel models are so important, this map is also zoomable. Use the same techniques discussed above.

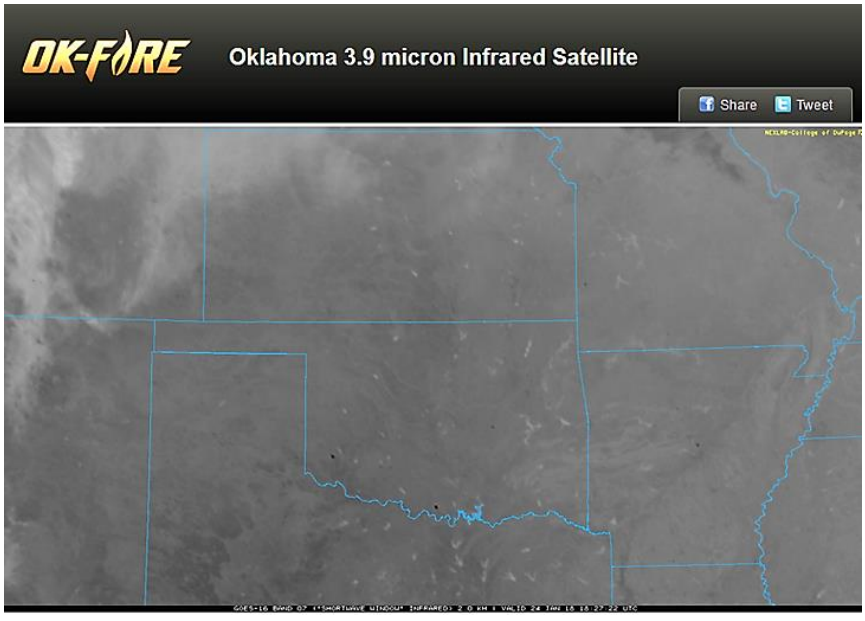


Fire Advisories and Outlooks

The first two maps in this section show any fire weather advisories for Oklahoma and the nation. These advisories are issued by the National Weather Service and include fire weather watches, red flag warnings, and dense smoke advisories. The next two maps show the fire outlooks over the next two days for the lower 48 states; these are issued by the Storm Prediction Center.

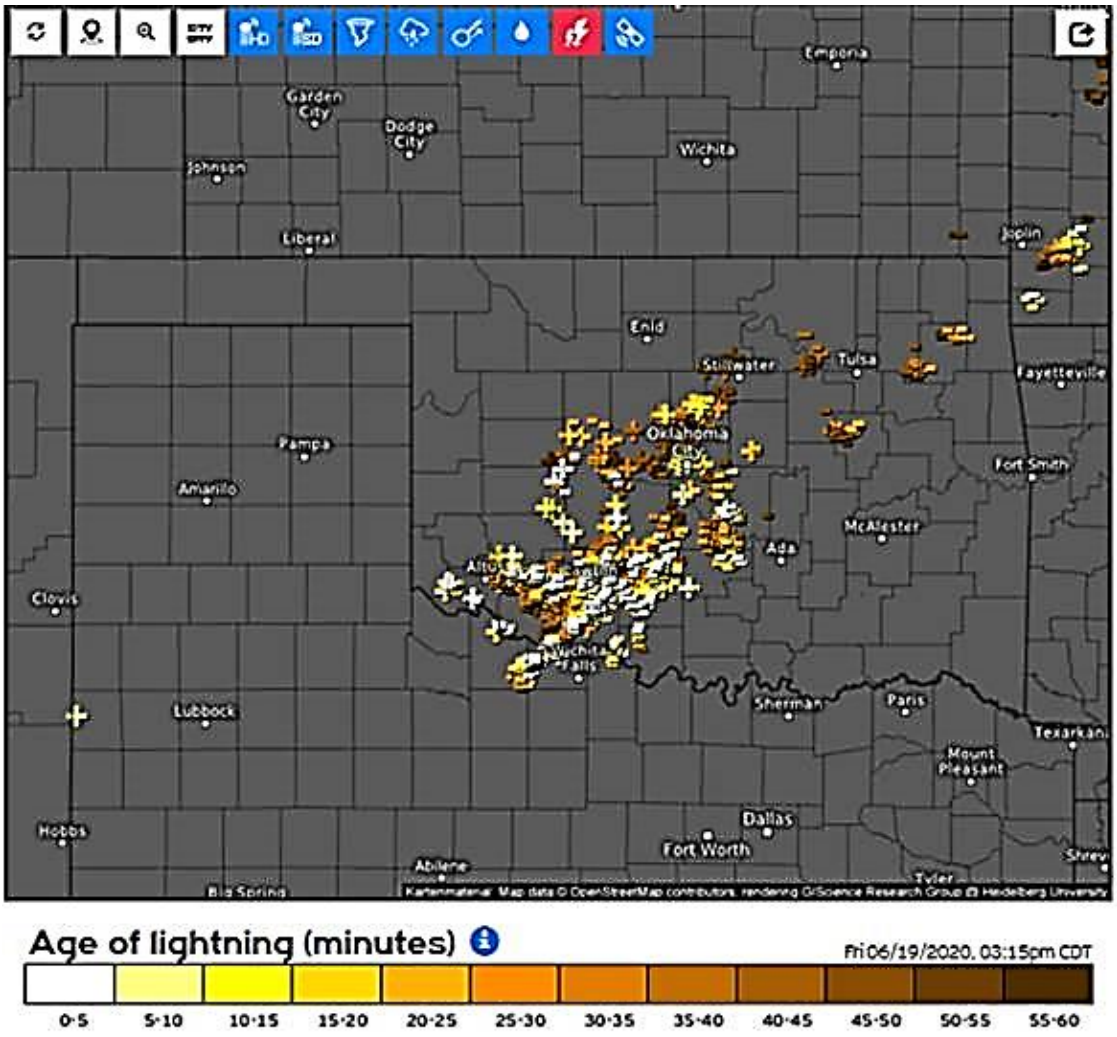
3.9 µ Infrared Satellite Map

This is an important map that is useful for identifying hot spots (wildfires, prescribed fires) over the southern Great Plains. In the old OK-FIRE, one had to make three clicks to get to it. Now the link is on the home page. To zoom into Oklahoma, on desktop and laptop computers, hold down the CTRL key while pressing the + key successively. To zoom back out, hold down the CTRL key while pressing the – key successively.



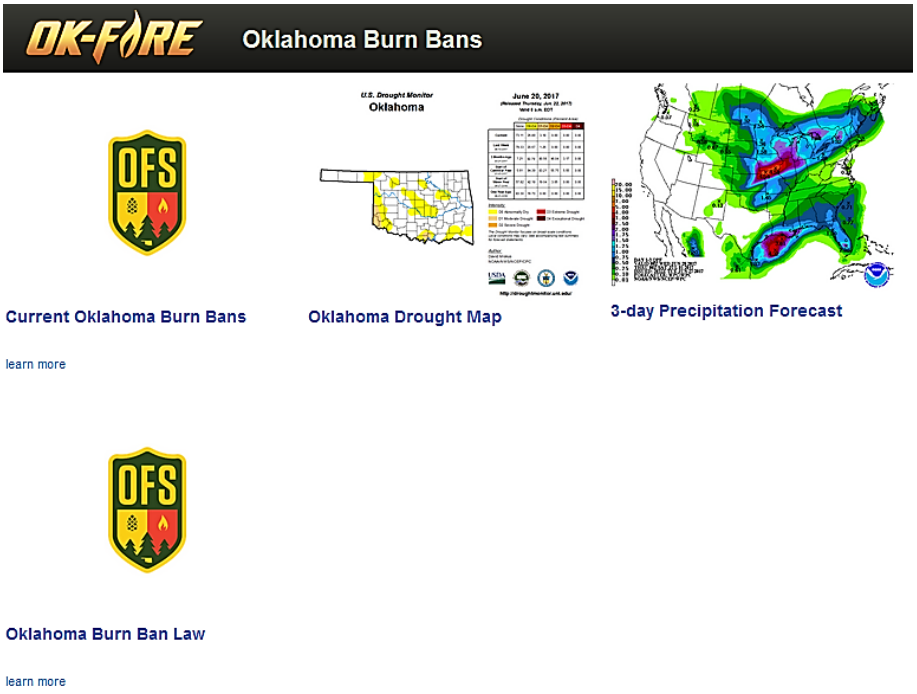
Recent Lightning Activity

This is another new left-menu item to which one in the old OK-FIRE would need three clicks to reach. Since lightning is important as an ignition source for wildfires, this is an important link to see where lightning has recently occurred. This Oklahoma-centered map is a product of WeatherOK, Inc. and shows current lightning strikes as well as strikes going back 60 minutes (see legend below). Strikes in the past 5 minutes are colored white.



Oklahoma Burn Bans

This section contains the current Oklahoma Burn Ban Law (last item) as well a link to the current burn bans in Oklahoma (governor or county declared). The middle two maps contain the information that counties need to know to ascertain if they are even eligible to declare a burn ban (with respect to the weather-based parts of the state law). The Oklahoma Drought Map is important since one's county has to have D2 (severe drought) or higher (D3, D4) to be able to qualify. In addition, no more than 1/2 inch of precipitation must be forecast over the next 3 days. This is where the 3-Day Precipitation Forecast map comes into play. While this map does not have enough resolution to allow the user to zoom into particular counties, one can in general tell whether the precipitation is low enough to qualify (the county would need to be in the greens or whites).



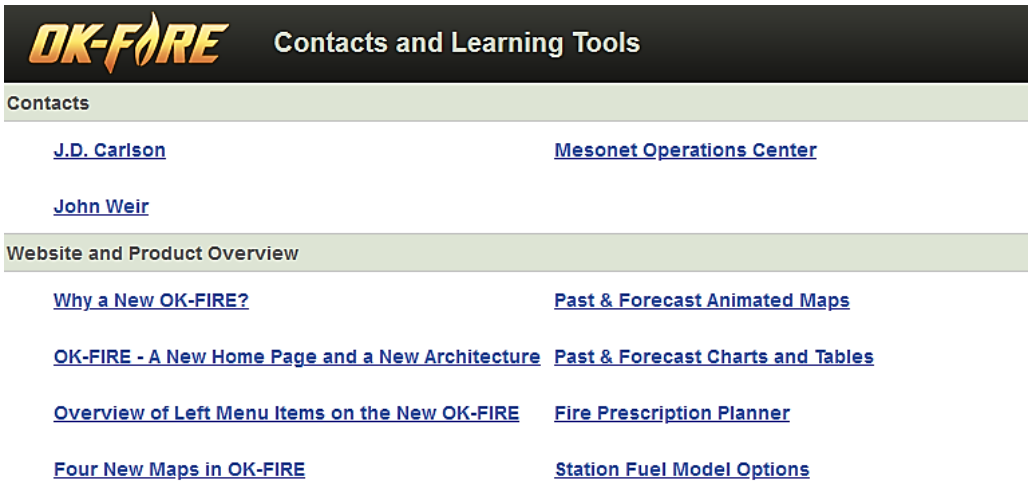
Additional Resources

This section contains a wealth of links to information related to wildland fire management. The major sections are as follows:

- Current National and Regional Conditions
- Recent Lightning Activity
- NWS Fire Weather Forecasts
- NWS Weather Forecasts and Outlooks
- Numerical Weather Forecast Models
- Fire Detection Products and Coordination Centers
- Smoke Dispersion Forecasts
- Air Quality Resources
- National Wildland Fire Resources

Contacts and Learning Tools

This section first contains contact information for J. D. Carlson, Program Manager of OK-FIRE at Oklahoma State University; John Weir, prescribed burn specialist at OSU; and the Mesonet Operations Center in case of problems with the website.



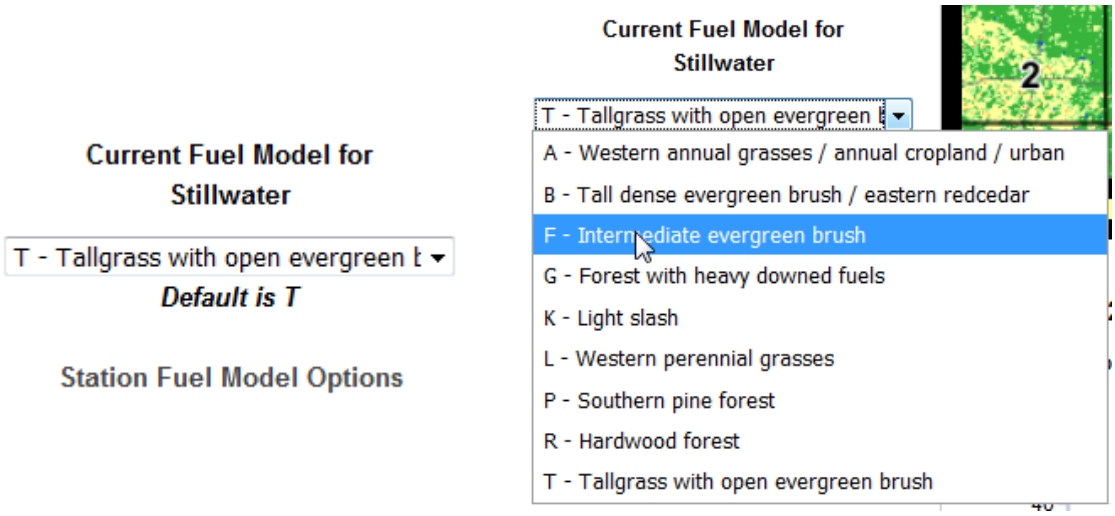
After "Contacts" are the following subsections: "Website and Product Overview", which contains a variety of useful PDF documents describing aspects of the OK-FIRE website; "OK-FIRE Basics", which contains PDFs of how to practically utilize OK-FIRE for wildfire and prescribed fire applications; "Workshop Presentations", which contains the latest presentations from OK-FIRE workshops; and "OSU Extension Materials", which contains a video on wildland fuels, drought, and fire danger, as well as PDFs of extension documents related to prescribed burning and smoke management.

News

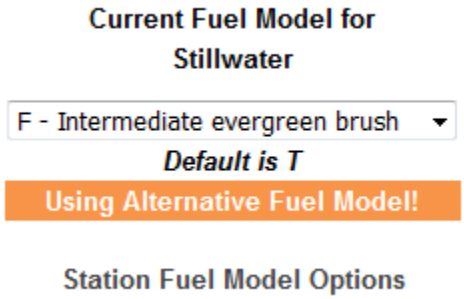
Occasional news items will be placed in this section. They are often referenced by the scrolling ticker on the home page. To get back to OK-FIRE again, just click on the OK-FIRE logo or use your browser back button.

Current Fuel Model for PRIMARY Station

At the bottom of the left menu section, the current fuel model chosen for the PRIMARY station on the home page appears with an option to change it to a different fuel model. Access the pull-down menu to select a different fuel model.



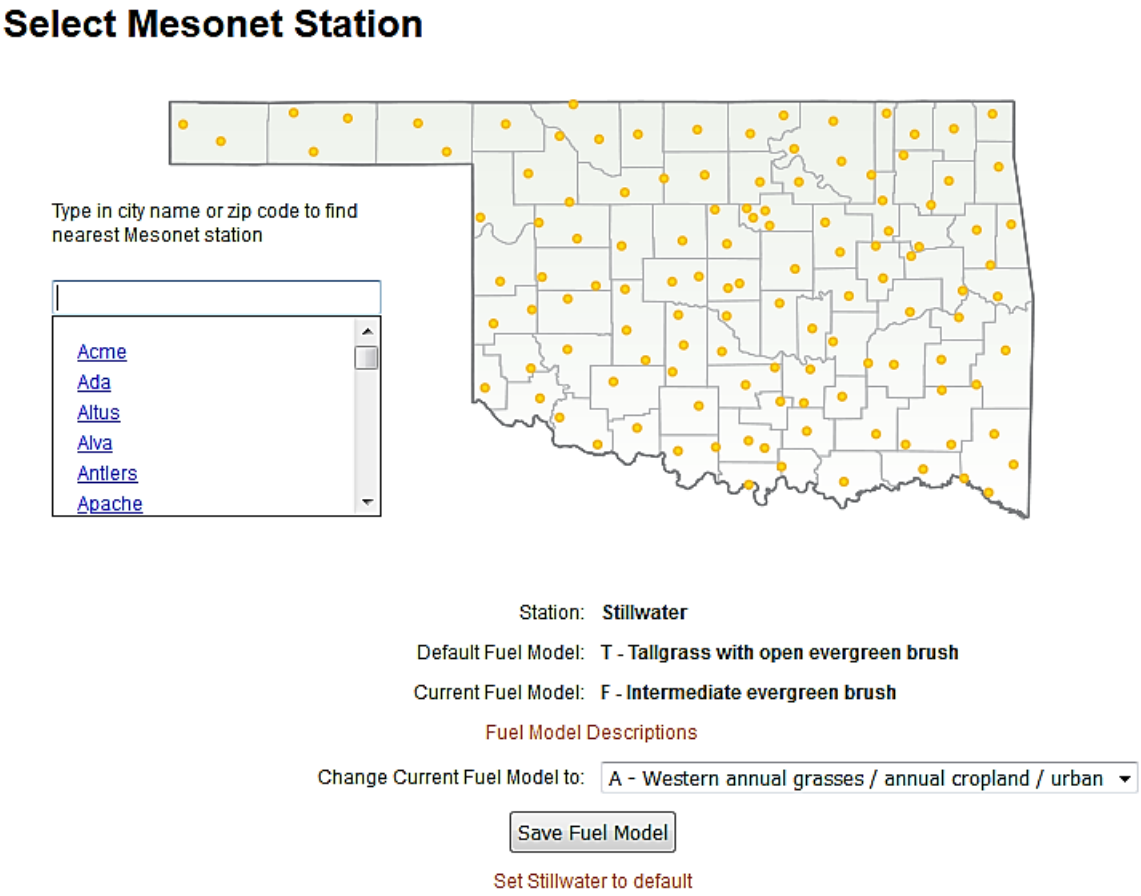
When a different fuel model than the default model is chosen (in this example, Model F), an orange-filled box appears telling you that you are using an alternative fuel model rather than the default:



This alternative fuel model now becomes the fuel model for the PRIMARY station throughout the website for the chart and table products until the user changes it back or to yet an even different fuel model.

Station Fuel Model Options

The final left menu item is “Station Fuel Model Options”. This is another important link to a page where you can change the fuel model for ANY Mesonet station. In the old OK-FIRE it took two clicks to access, but being so important, it is now one of the left menu items.



A more detailed description of how to use this page is provided in the PDF document “Station Fuel Model Options” in the “Contacts and Learning Tools” section of the OK-FIRE site.