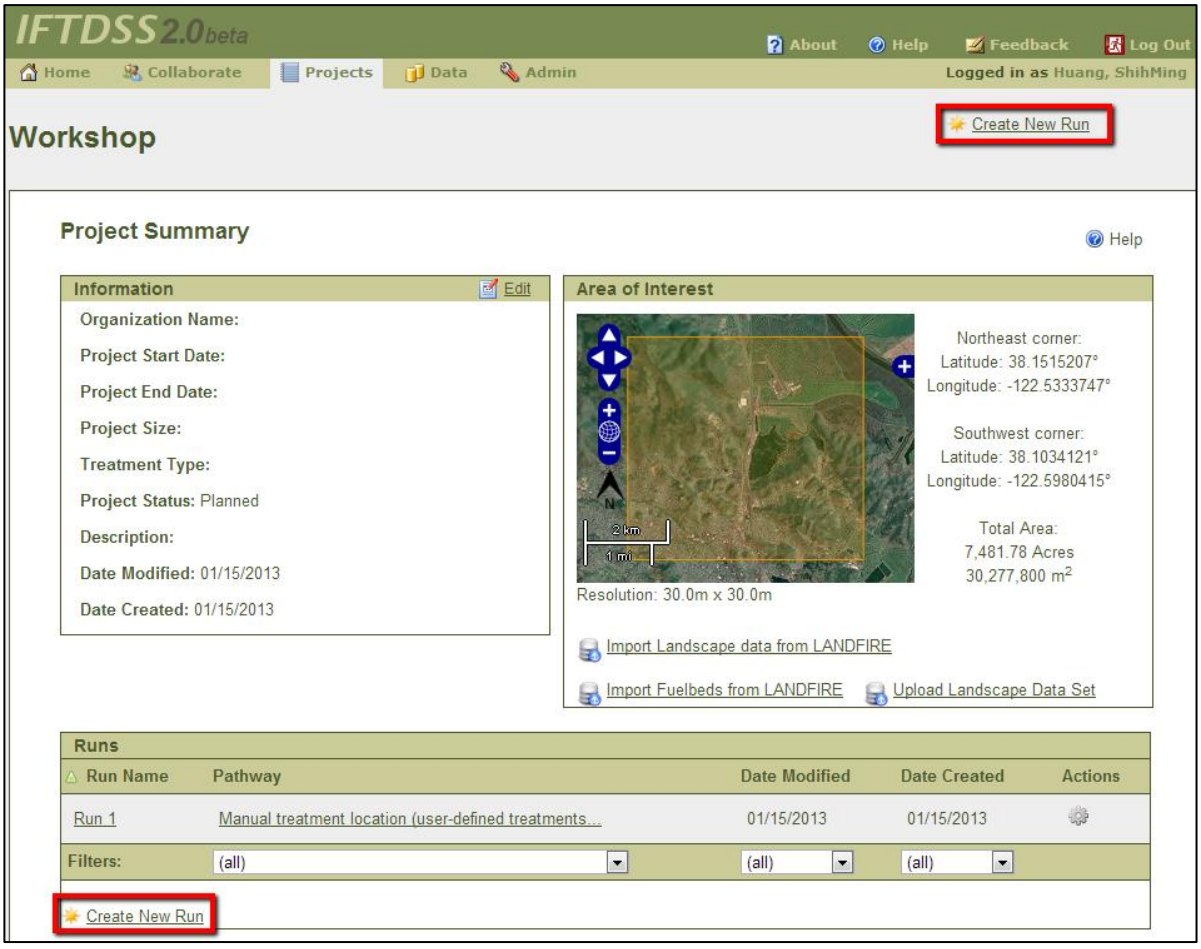
IFTDSS Workshop

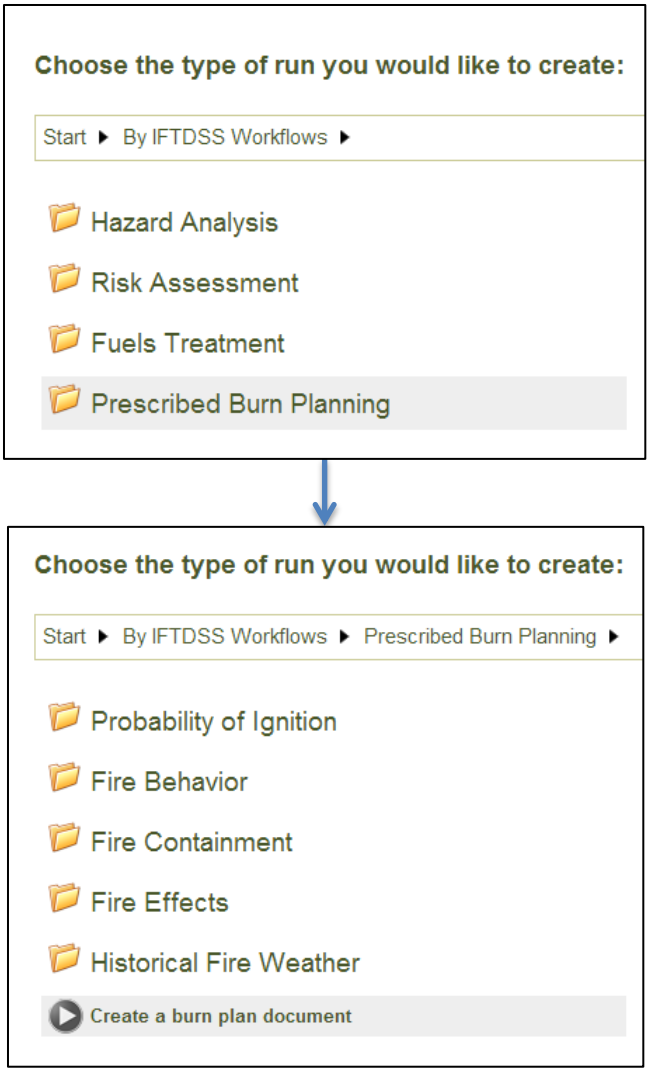
Handout 10: Prescribed Burn Plan

For more detailed instructions on preparing a prescribed burn plan, please refer to the **Preparing a Prescribed Burn Plan** tutorial within the IFTDSS online help.

1. From the Project Summary page, click on **Create New Run**.

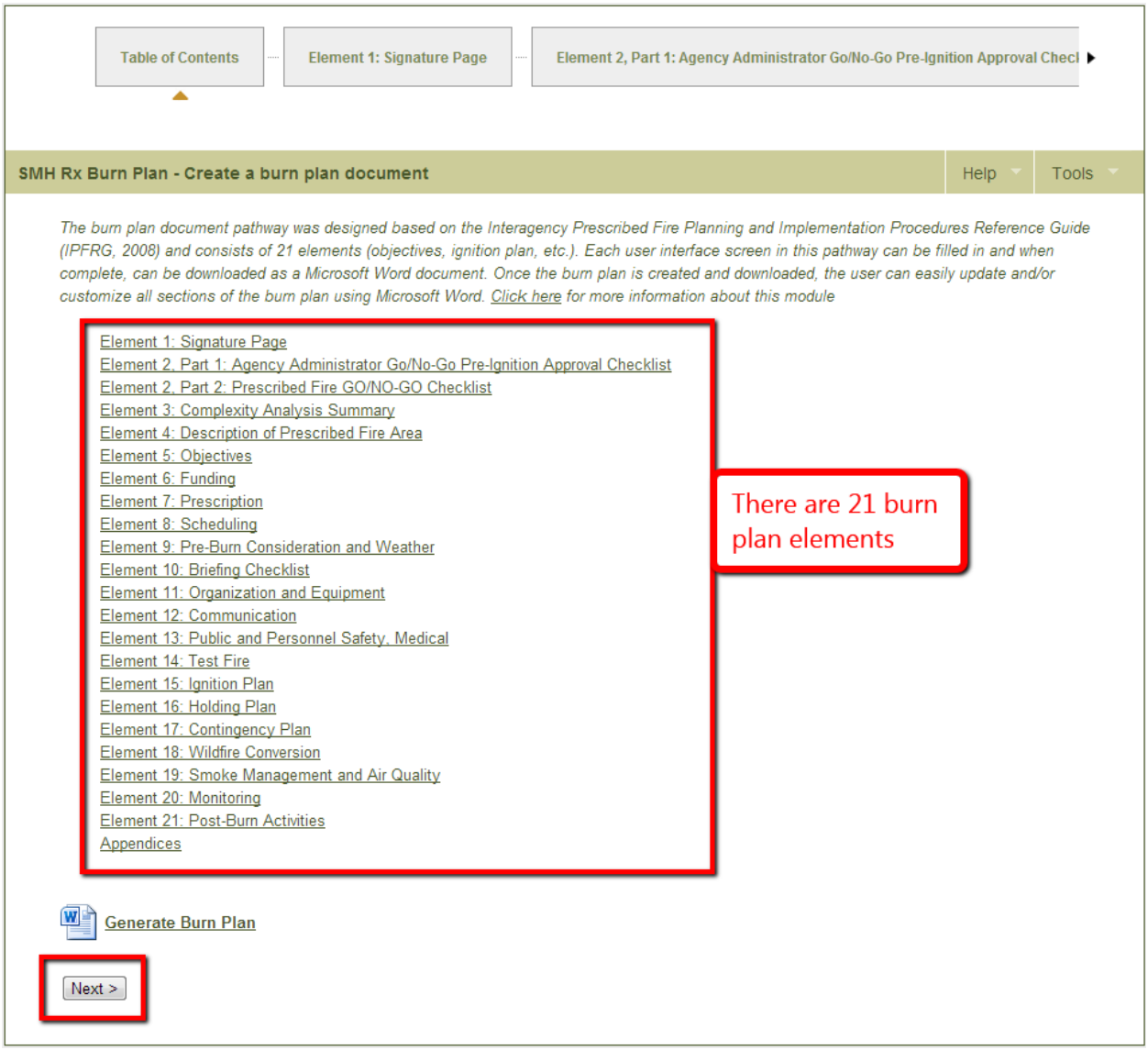


2. Select the **Prescribed Burn Planning** workflow, and then select the **Create a burn plan document** pathway.

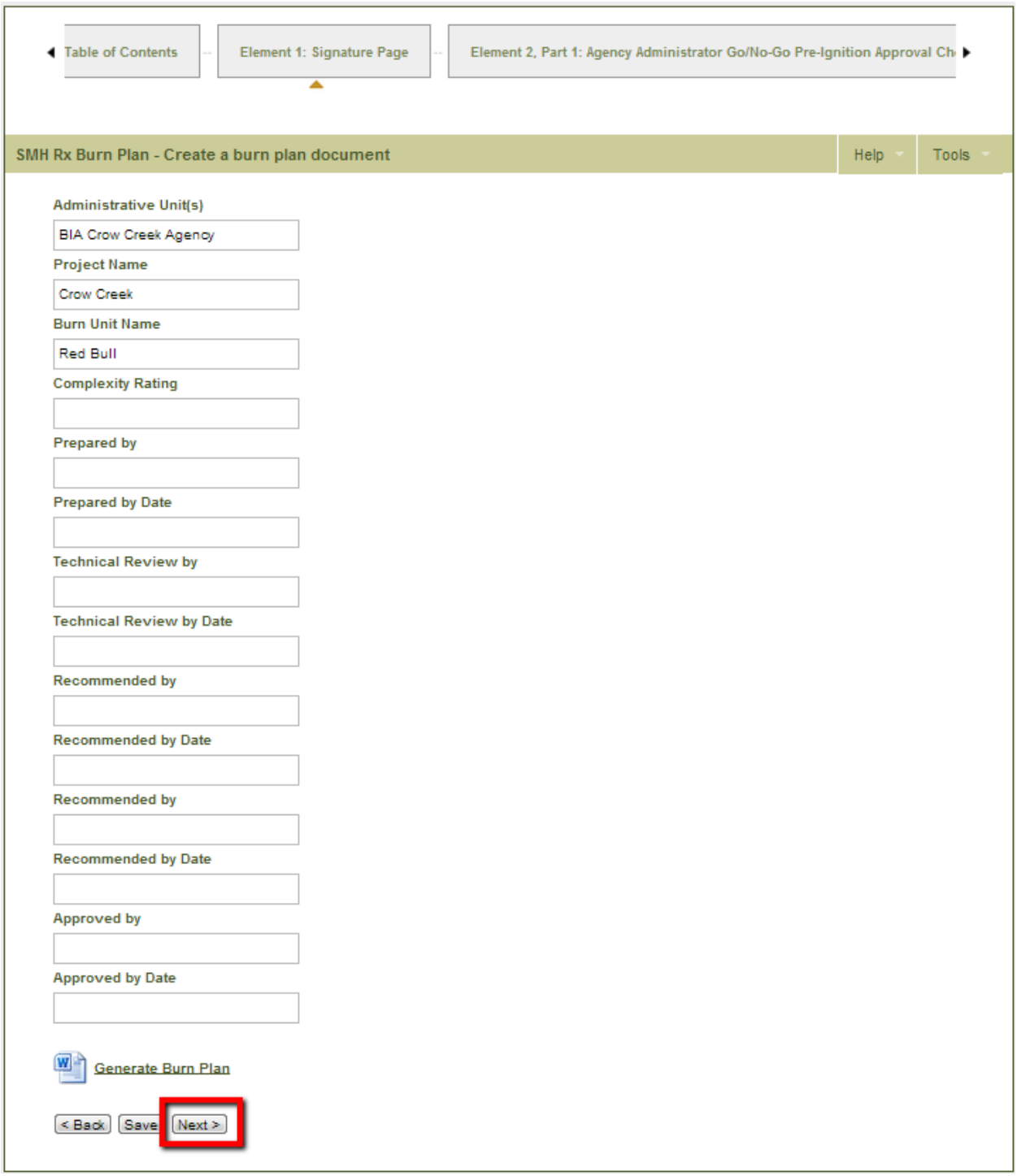


3. Give the run a unique name, then click **Next**.

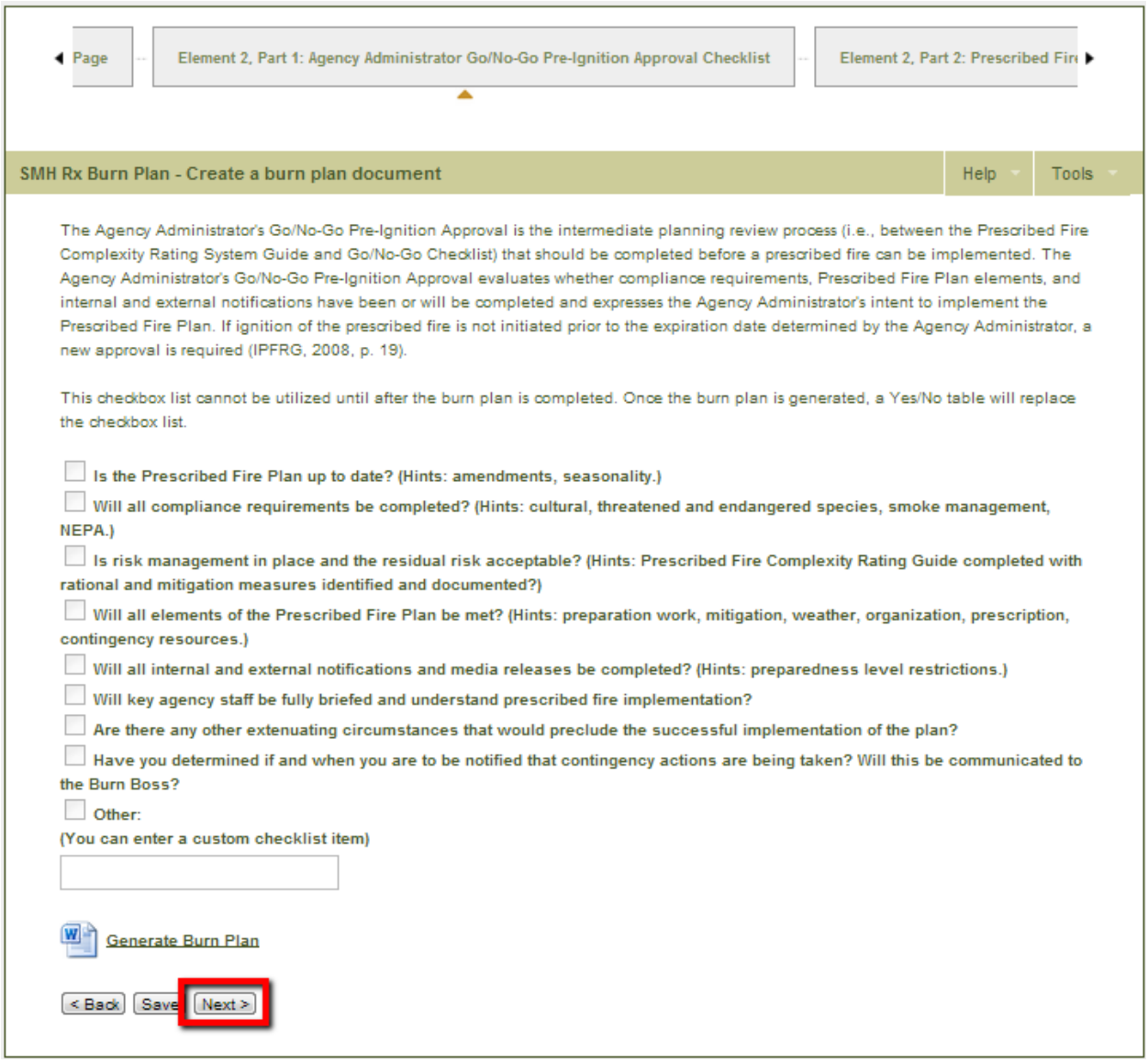
4. You are now on the **Table of Contents** view for the burn plan. You can navigate from element to element by using any of the following:
    a. The bar at the top of the page.
    b. The links located in the Table of Contents.
    c. The Next button on the bottom left of the page.



5. On the **Element 1: Signature Page**, fill out the form and Click **Next**.



6. On the next two steps, **Element 2, Part 1** and **Part 2**, the Go/No-Go checkbox lists on these two pages cannot be used until after the burn plan is completed. After the burn plan is generated, a Yes/No table will replace the checkbox list. Click **Next**.



7. You can continue to navigate through the elements by choosing **Next**. For the workshop purposes, we are going to skip to **Element 7: Prescription**. Use the arrow on the right to scroll through the elements. When you get to **Element 7: Prescription**, click on the link.

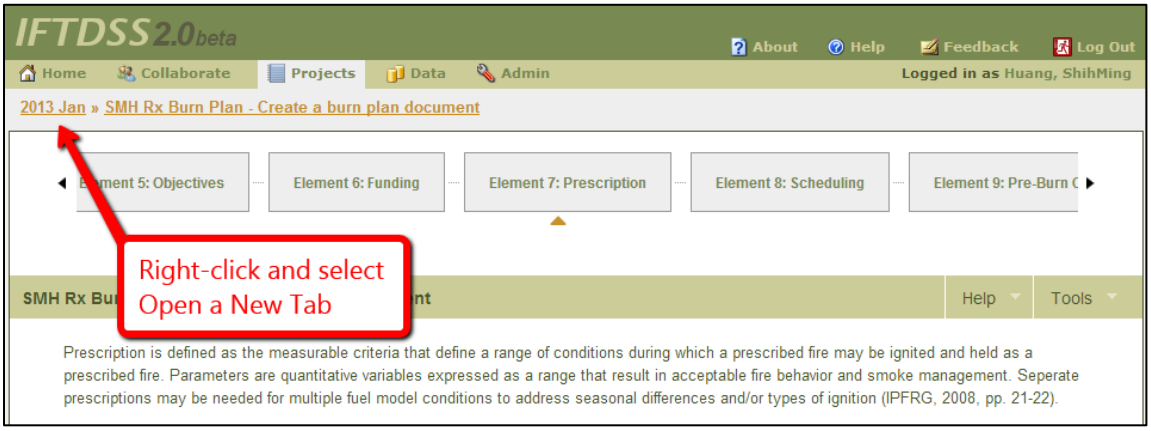
8. On **Element 7: Prescription**, fill in the form manually or import the inputs and outputs from tagged model runs (only runs within the current project will be available for data import). In this workshop, you will create a fire behavior run, and import the values into the prescription.

9. There are several tools to choose from for fire behavior and effects modeling, as seen in this list:

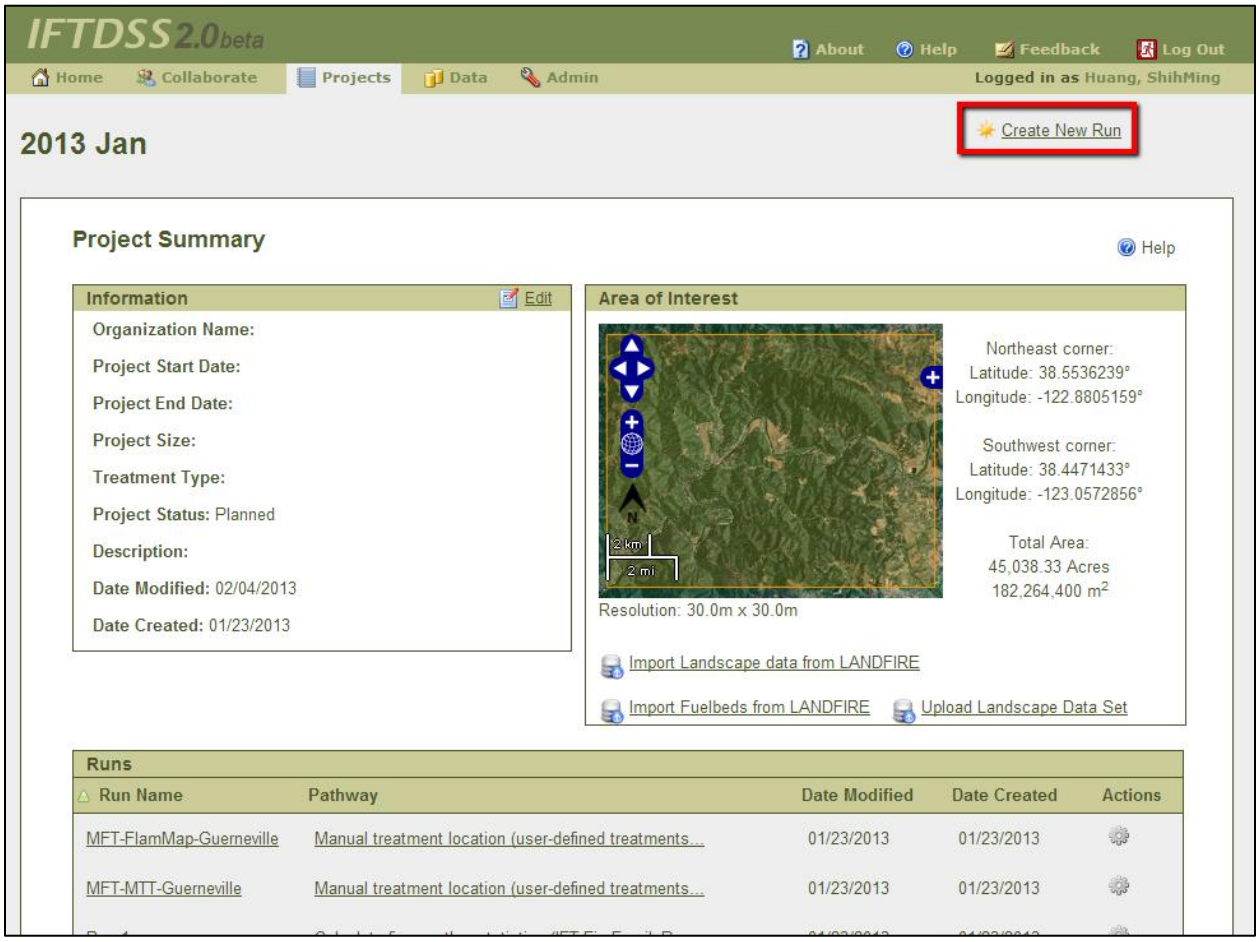
[a]As implemented in BehavePlus [b]As implemented in FCCS [c]As implemented in FlamMap [d]As implemented in FOFEM [e]As implemented in Consume ○ = facilitate in decision making ● = outputs needed for burn plan	Fire Behavior					Fire Effects				Fire Containment				Probability of Ignition		Data and Mapping Tools	
	Surface fire behavior [a]	Surface fire behavior for FCCS fuelbeds [b]	Crown fire behavior [a]	Fire behavior for individual stands [c]	Fire behavior across a landscape [c]	Consumption and Emissions [d]	Tree Mortality [d]	Crown scorch height [a]	Natural fuels consumption [e]	Spotting distance [a]	Containment resources [a]	Safety zone size [a]	Fire size and spread [a]	Probability of ignition from a firebrand [a]	Probability of ignition from lightning [a]	Data Studio (project area of interest maps)	LANDFIRE Data (Fuel Model & Topography)
Element 3: Complexity Analysis Summary	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Element 4: Description of Prescribed Fire Area					●											●	●
Element 5: Objectives	○	○	○	○	○	○	○	○	○								
Element 7: Prescription	●	●	○	●	●	○	○	●	○	●				●			
Element 15: Ignition Plan	○																
Element 16: Holding Plan	○	○	○	○	○					○	○		○	○		○	
Element 17: Contingency Plan	○	○	○	○	○	○		○		○	○	○	○	○			
Element 19: Smoke Management and Air Quality						●			●								
Appendicies: Appendix A. Maps (Vicinity and Project)					●												●

10. In this exercise, we will use Surface fire behavior (IFT-surface) for our prescription (Element 7).

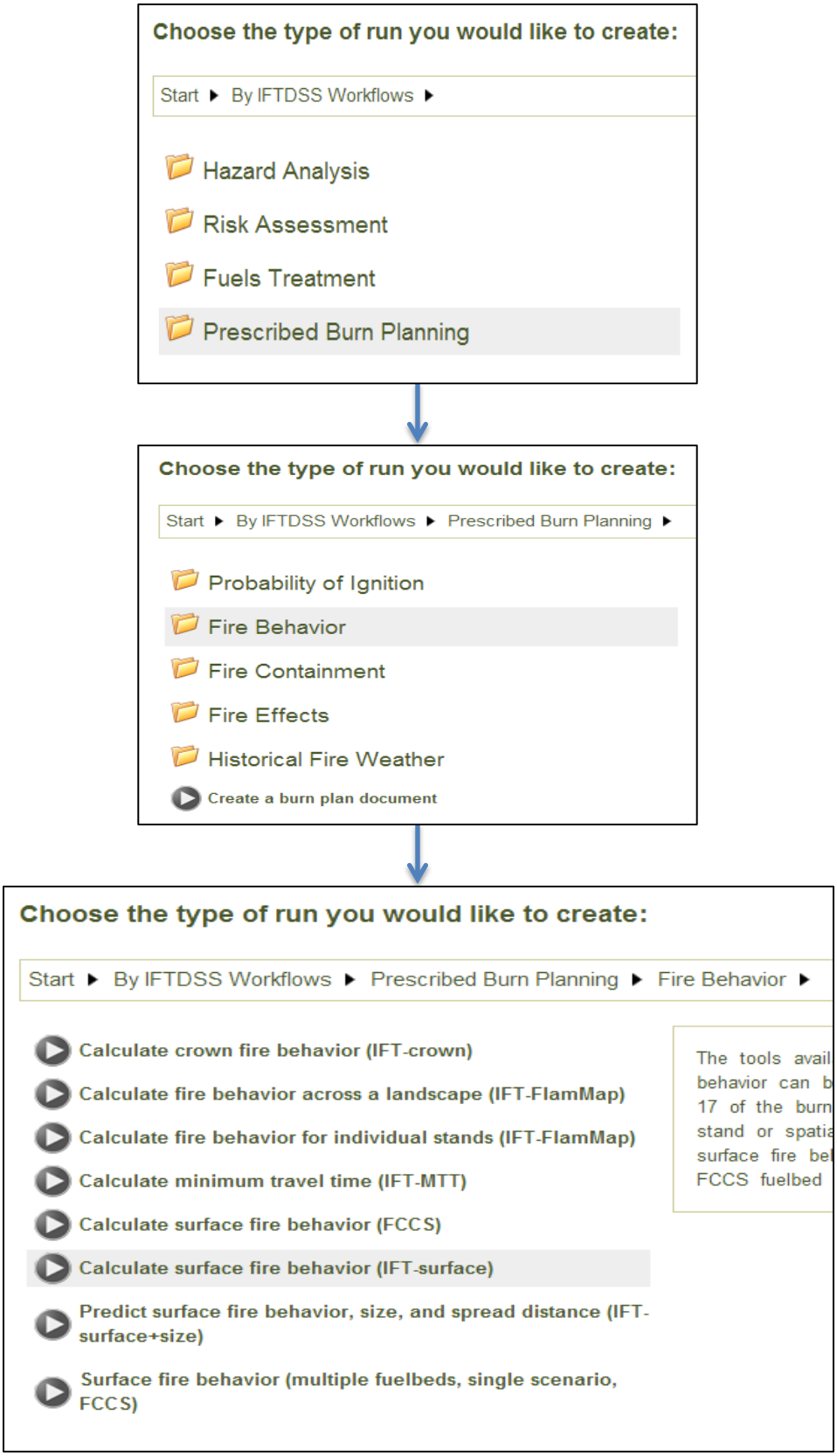
11. To start modeling potential fire behavior, right-click on the project link, and select **Open a New Tab**.



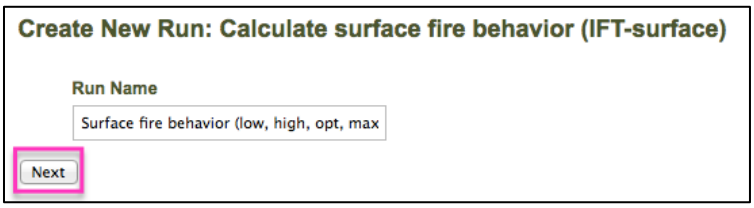
12. In your browser's window, select the new tab you opened. Now you are on the **Project Summary** page. Click **Create New Run**.



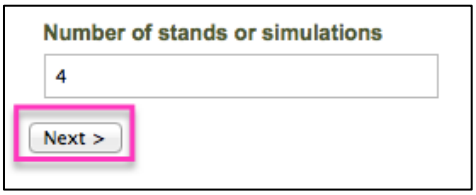
13. Select **Prescribed Burn Planning**, then select **Fire Behavior**, and then select **Calculate surface fire behavior (IFT-surface)**.



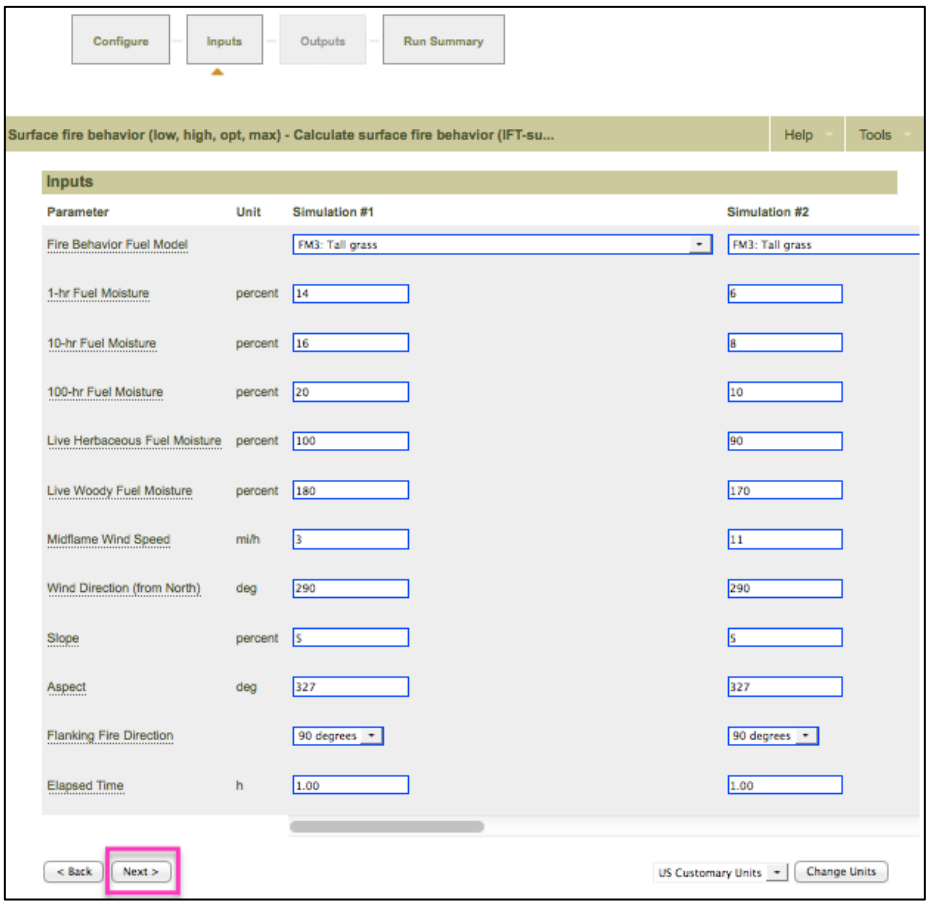
14. Give the run a descriptive name and click **Next**.



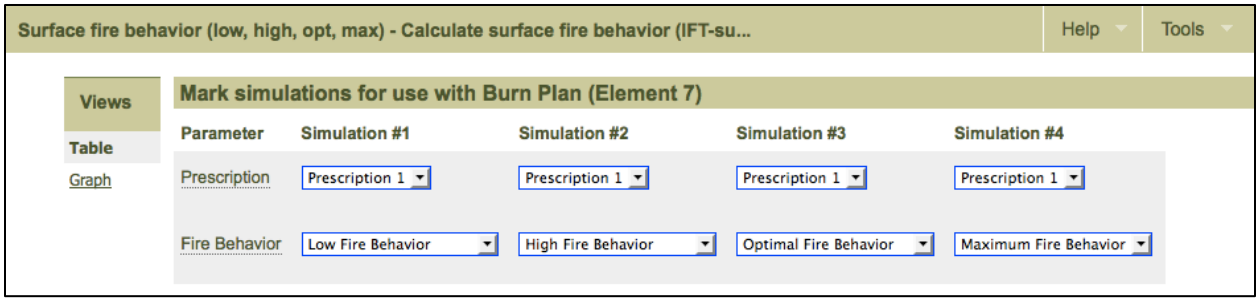
15. Enter 4 for "number of stands or simulations" so you can model the low, high, optimal, and maximum fire behavior in one run. Click **Next**.



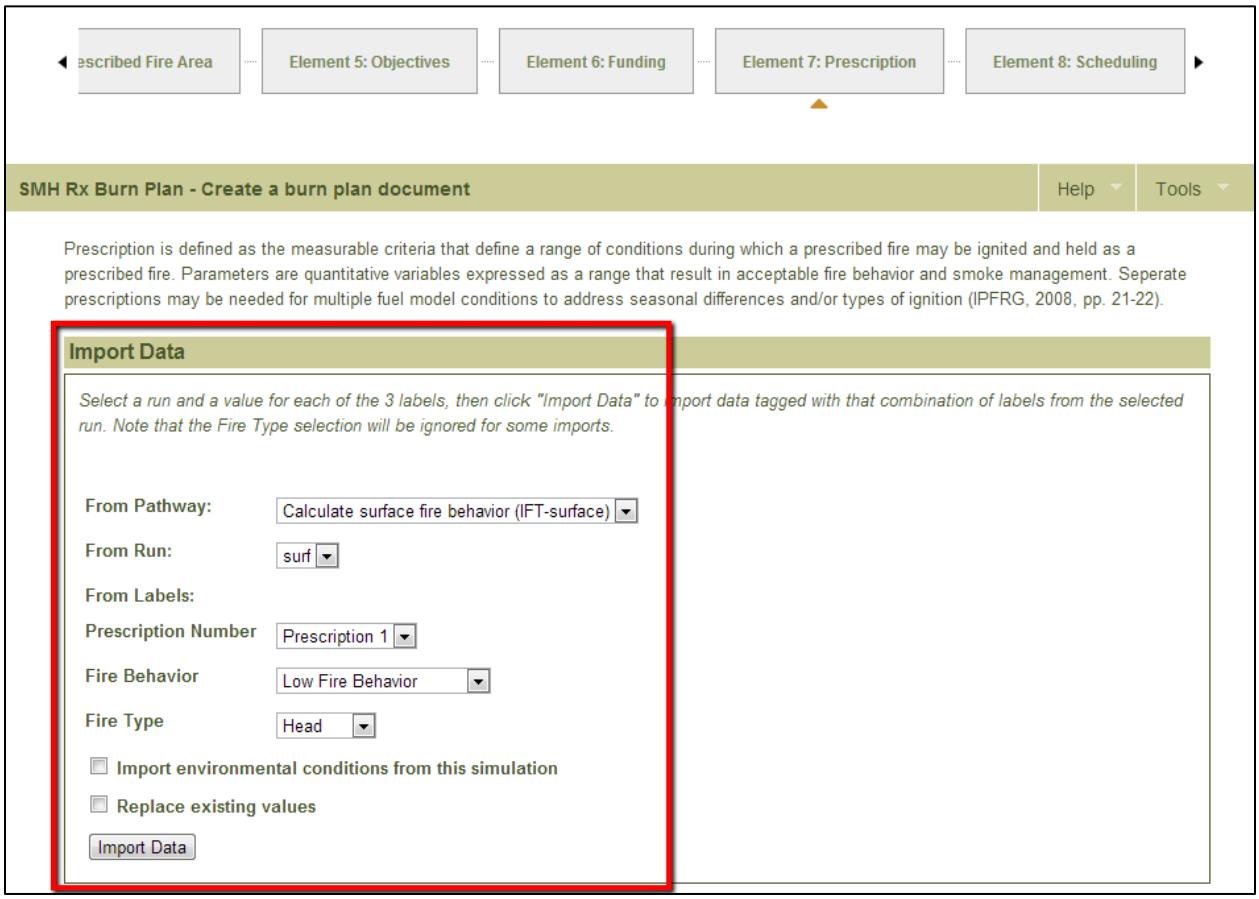
16. Enter your Environmental Prescription into the surface fire behavior inputs. Keep in mind that Simulation 1 = Low Fire Behavior, Simulation 2 = High Fire Behavior, Simulation 3 = Optimal Fire Behavior, and Simulation 4 = Maximum Fire Behavior. Scroll to the right using the gray bar below the input boxes to enter the information for additional simulations. Click **Next**.



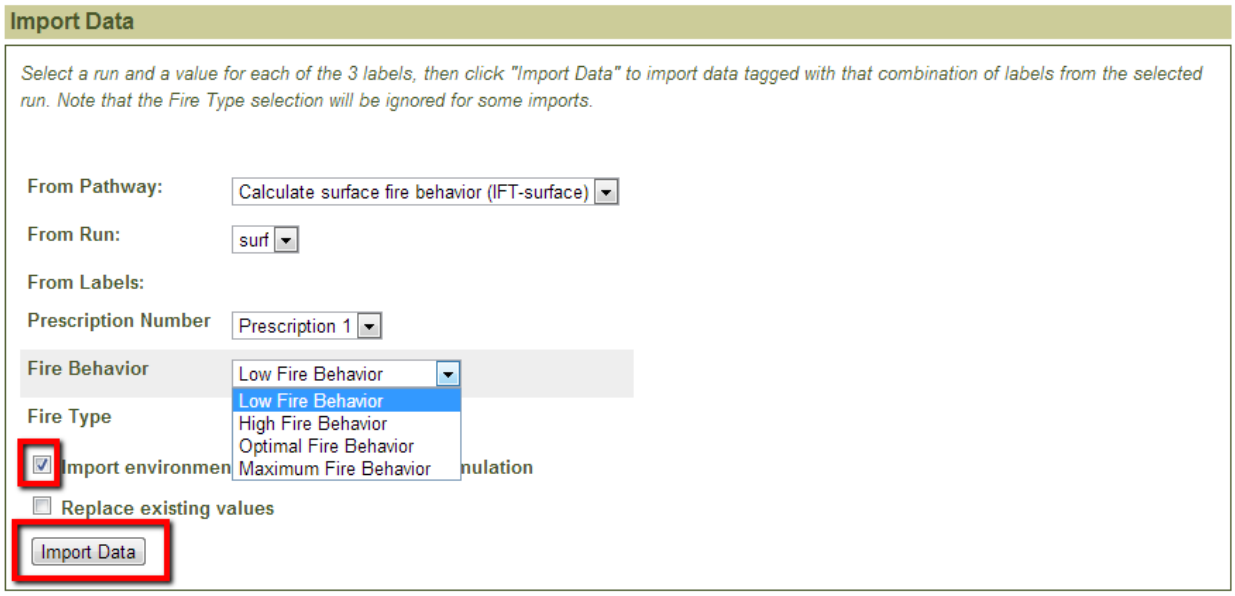
17. Now you are on the Outputs step. Review your outputs and tag the simulations for use in the burn plan. Under **Mark simulations for use with Burn Plan (Element 7)**, use the drop-downs to select the Prescription number for each simulation. In this example, you will be populating Prescription 1. Use the drop-downs to select the Fire Behavior type (low, high, optimal, and maximum). Click **Save** at the bottom of the page.



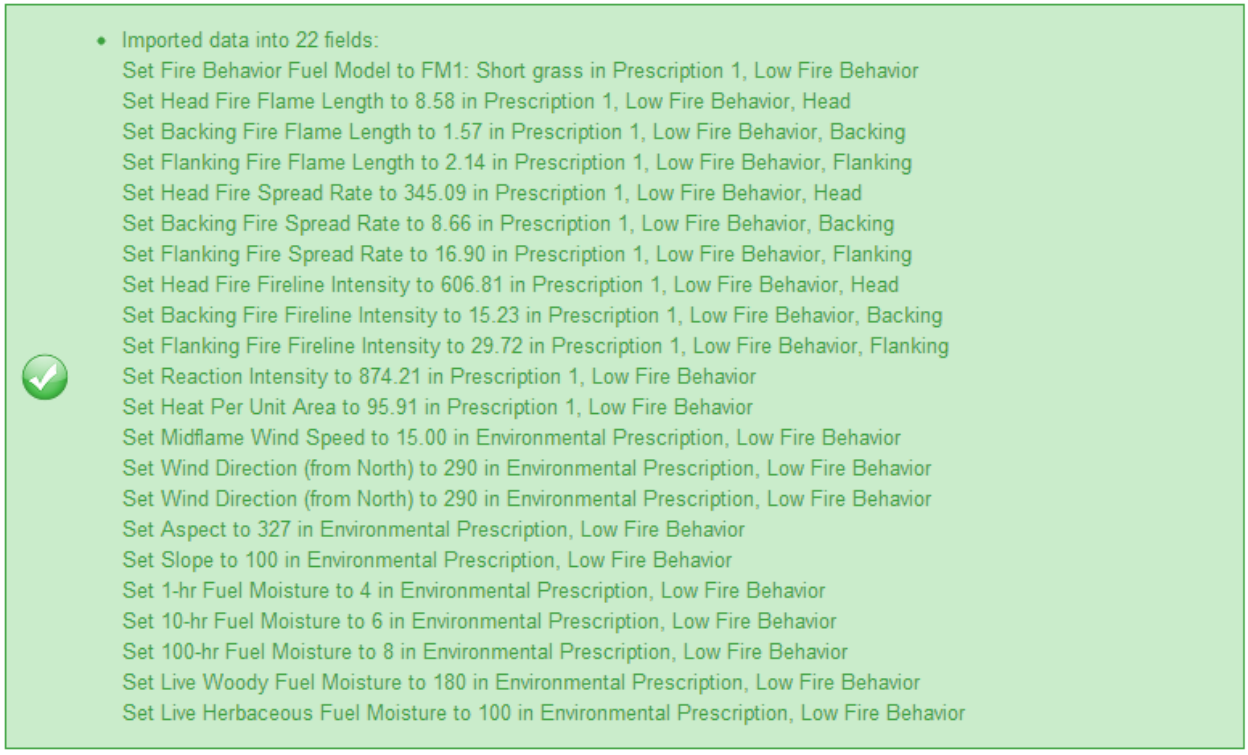
18. Navigate back to **Element 7: Prescription** (in your browser, select the tab of the burn plan document). Refresh the page by hitting the **F5** key on your keyboard. Now, under the **Import Data** section, the pathways and runs that you tagged in the previous step (step 17) will be visible in the drop-downs.



19. Check the **Import environmental conditions from this simulation** box and click **Import Data**. This action imports data for **Low Fire Behavior**. Continue to select each of the remaining fire behavior categories (high, optimal, and maximum) and click **Import Data** for each category.



20. After each data import, a green box will show you the parameters that were populated into **Element 7**.



21. After you are done importing all of the data from your IFT-surface run, scroll down to review the populated environmental and fire behavior prescription.

Prescription #1 - Fire Behavior Outputs

	Low Fire Behavior (within unit)	High Fire Behavior (within unit)	Optimal Fire Behavior (within unit)	Maximum Fire Behavior (outside unit)
Fuel model	FM1: Short grass	FM1: Short grass	FM1: Short grass	FM1: Short grass

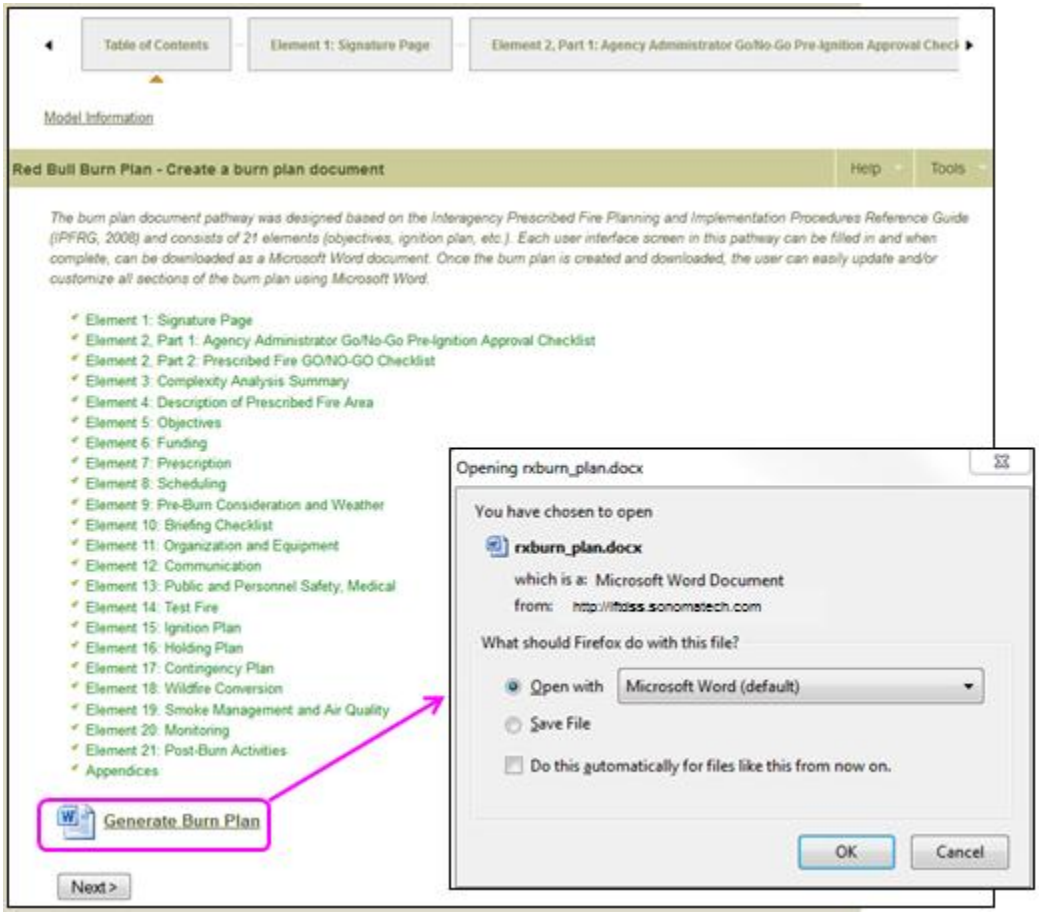
	Low Fire Behavior (Head)	Low Fire Behavior (Backing)	Low Fire Behavior (Flanking)	High Fire Behavior (Head)	High Fire Behavior (Backing)
Flame length (ft)	8.58	1.57	2.14	8.58	1.57
Rate of spread (ch/h)	345.09	8.66	16.90	345.09	8.66
Fireline intensity (btu/ft/s)	606.81	15.23	29.72	606.81	15.23
Spotting distance (mi)					
Scorch height (ft)					

	Low Fire Behavior (within unit)	High Fire Behavior (within unit)	Optimal Fire Behavior (within unit)	Maximum Fire Behavior (outside unit)
Probability of ignition (%)				
Reaction intensity (btu/ft2/min)	874.21	874.21	874.21	874.21
Heat per unit area (btu/ft2)	95.91	95.91	95.91	95.91

22. Continue to model fire behavior using pathways in the **Prescribed Burn Planning** workflow if desired. Tag the simulations on the Output step of those simulations for use in the **Import Data** section of **Element 7**.

23. Click **Next** at the bottom of the page to save your progress. You can continue to scroll through and fill out elements of the burn plan. In this workshop, we are going to skip the remainder of the elements.

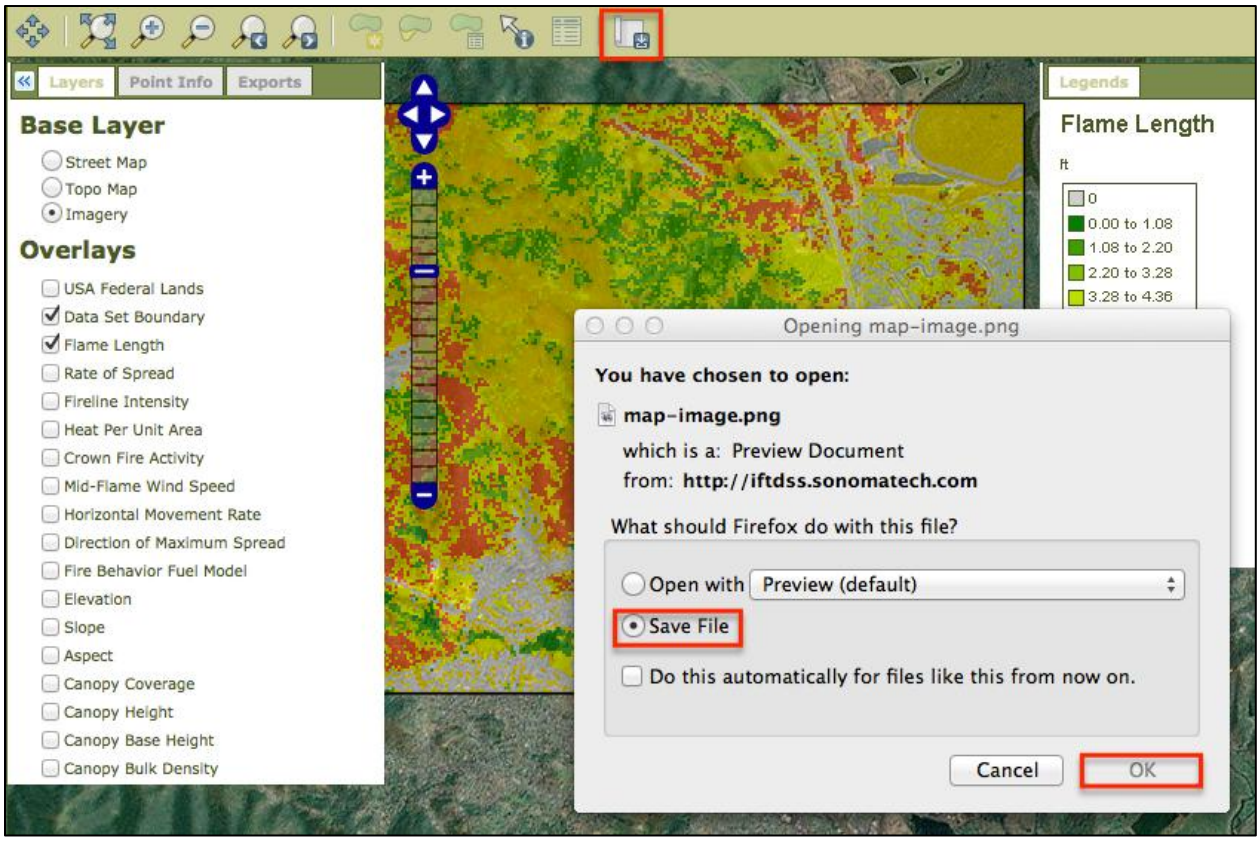
24. On the bottom of any Burn Plan page, click **Generate Burn Plan,** and save the burn plan as a Microsoft Word document. Select **Open with Microsoft Word** and choose OK.



25. After downloading the burn plan into a Microsoft Word document, you can easily customize it. You can fill out elements in the online burn plan template located within the IFTDSS website and/or after generating the burn plan into a Word document.

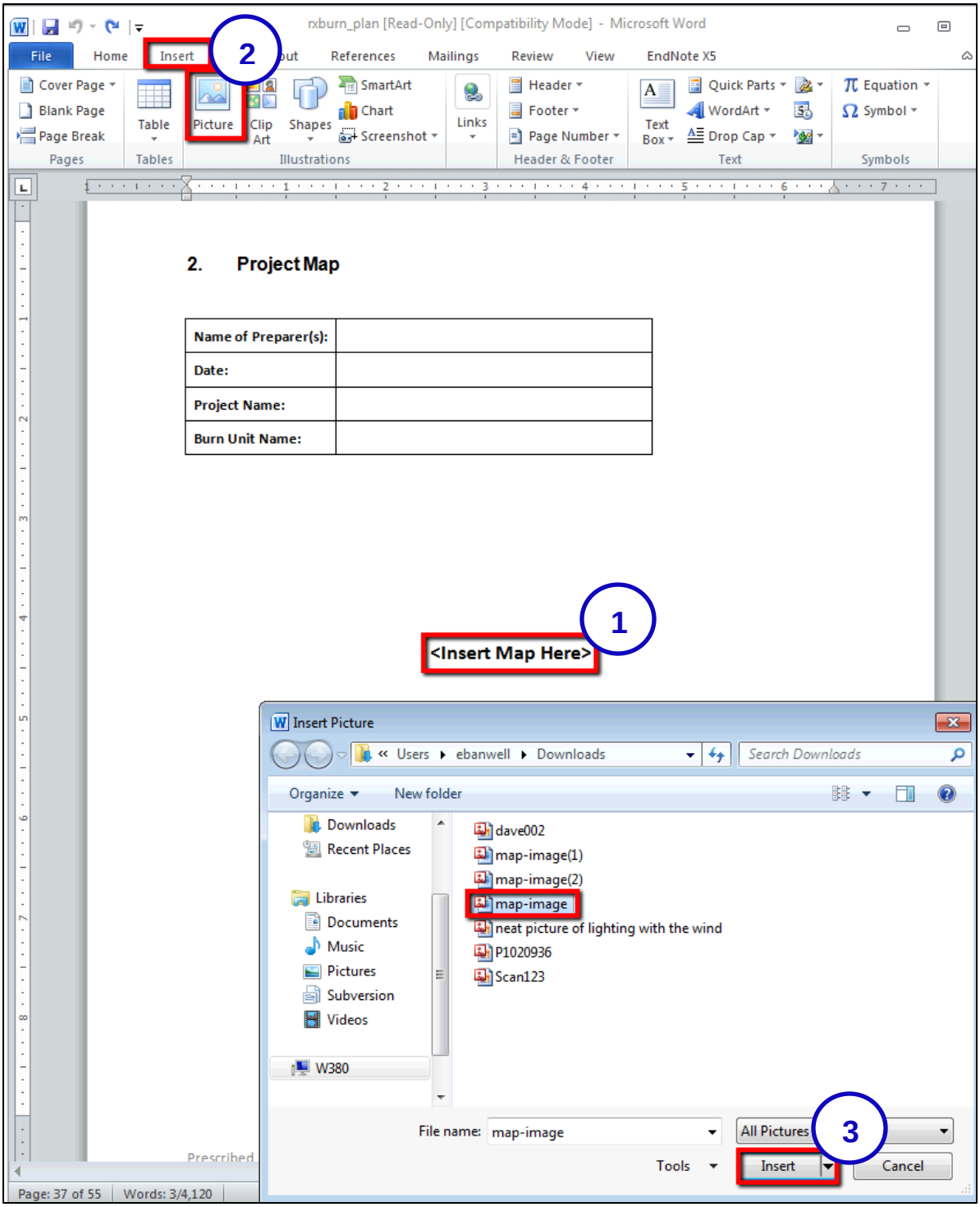
26. Next, you will save a map image from IFTDSS, and paste it into your burn plan in Microsoft Word. During this workshop, you completed a Hazard Analysis (Handout 5). Navigate back to your hazard analysis run (it is called "Calculate fire behavior across a landscape (IFT-FlamMap)"), and go to the Outputs step.

27. Select an overlay (in this example, Flame Length and Data Set Boundary are selected). On the map toolbar, select the **Save Map Image** button. Select **Save File** and choose **OK**.



28. Now, open your Microsoft Word burn plan. Navigate to Appendix A: Maps, Section 2: Project Map.

29. To insert a saved map image into a Microsoft Word document:
    1. Highlight the **<Insert Map Here>** text.
    2. Click on the **Insert** tab and select **Picture**.
    3. Navigate to your saved map image (if the image was automatically saved, it is most likely saved in the Downloads folder) and select **Insert**.



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