

Treatable Landscapes Calculator Tool User Guide

The California Vegetation Treatment Program (CalVTP), developed by the Board of Forestry and Fire Protection (Board), is a critical component of the state's multi-faceted strategy to address California's wildfire crisis. The CalVTP Program Environmental Impact Report (Program EIR) provides a powerful tool to expedite the implementation of vegetation treatments to reduce wildfire risk while conserving natural resources. The CalVTP includes the use of prescribed burning, mechanical treatments, manual treatments, prescribed herbivory, and herbicides as tools to reduce hazardous vegetation around communities in the Wildland-Urban Interface (WUI), to construct fuel breaks, and to restore healthy ecological fire regimes (ecological restoration). To assist users in developing projects, the Treatable Landscapes Calculator is a tool that allows project proponents to acquire essential information required in the process of preparing a Project-Specific Analysis (PSA) and addendum to the CalVTP Program EIR.

The geographic area analyzed in the CalVTP Program EIR includes 20.3 million acres primarily within the State Responsibility Area (SRA) and is referred to as the Treatable Landscape. The ability of project proponents to use the CalVTP and prepare a PSA for vegetation treatment projects provides a streamlined mechanism to achieve CEQA compliance and supports opportunities for increased vegetation treatment to contribute to the State's wildfire management and mitigation efforts. As part of the CalVTP, CAL FIRE and other project proponents would implement vegetation treatment activities in the treatable landscape to help meet the Governor's goals in response to California's wildfire crisis.

The [CalVTP Home Page](#)¹ is a dynamic resource with new information on project development, implementation, and resources. Check back frequently for announcements or updates. Resources include the following:

- Links to the Online Viewers including the Treatable Landscape Viewer and Calculator, Proposed Projects Viewer, and Approved and Completed Viewers, and links to download associated public spatial data.
- Frequently Asked Questions addressing over 30 topics, including information on the Professional Foresters Law, Registered Professional Foresters (RPF), and a roster of currently licensed RPFs in the State of California;
- The Full CalVTP Program Environmental Impact Report, including responses to comments, individual chapters, appendices with supplemental information and templates, the CEQA Findings and Statement of Overriding Consideration, and the California Department of Fish and Wildlife (CDFW) Environmental Filing Fee Cash Receipt to the Board;
- A Project Submission Data Entry User Guide with information on completing and submitting a Proposed, Approved, or Completed project online or manually, and geodatabase (.gdb) package templates for Proposed, Approved, and Completed Projects and Treatment Activities.
- Example PSAs and PSA/Addenda representing a variety of geographies, treatment types and activities, and environmental issues and Mitigation Monitoring and Reporting implementation tools.

¹ <https://bof.fire.ca.gov/projects-and-programs/calvtp-homepage/>

Important Terms

Project Boundary

The entire area to be treated, encompassing the outer boundary of all areas assessed in the PSA or PSA/Addendum. This polygon may include areas that are not targeted for treatment. The Project Boundary will be at least equal to, but often larger than, the Treatment footprint (treated acres).

Treatment Type

Three treatment types are covered by the CalVTP Program EIR: 1) ecological restoration, 2) fuel breaks (shaded and non-shaded), and 3) wildland-urban interface (WUI) fuel reduction.

Treatment Activity

Five treatment activities are covered by the CalVTP: prescribed fire (pile burning and broadcast burning), manual treatment, mechanical treatment, prescribed herbivory, and herbicide application. Each treatment activity should be represented by a separate polygon that shows the extent of each treatment activity to be implemented.

Fuel Type

The treatable landscape is divided into three broad categories of hazardous vegetative fuels (referred to as “fuel types”) that exhibit similar fire behavior characteristics: grass, shrub, and tree.

Using the Treatable Landscape Calculator Tool

Step 1: Go to the CalVTP Treatable Landscapes Web Application

Navigate to the Treatable Landscapes Viewer.² On this page, click the 'View' button to open the Web Application (Figure 1).

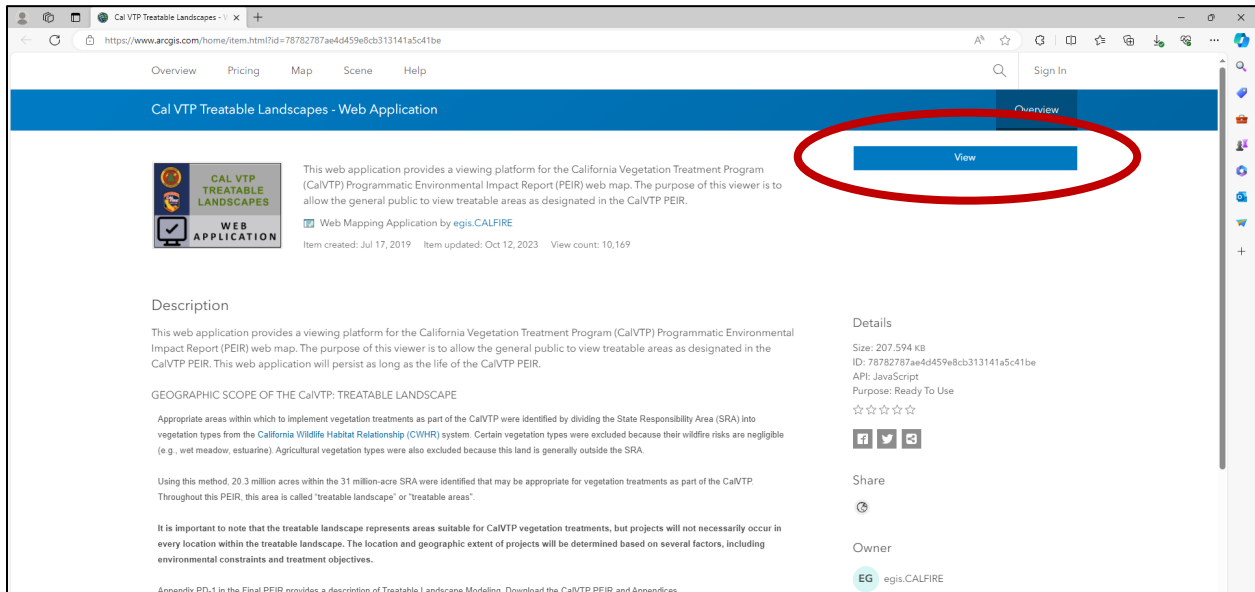


Figure 1. Accessing the Treatable Landscapes Viewer.

This will take you to the Web Application, and you will see a Web Viewer map, text panel, and tool pane on the right side with information about the Viewer (Figure 2).

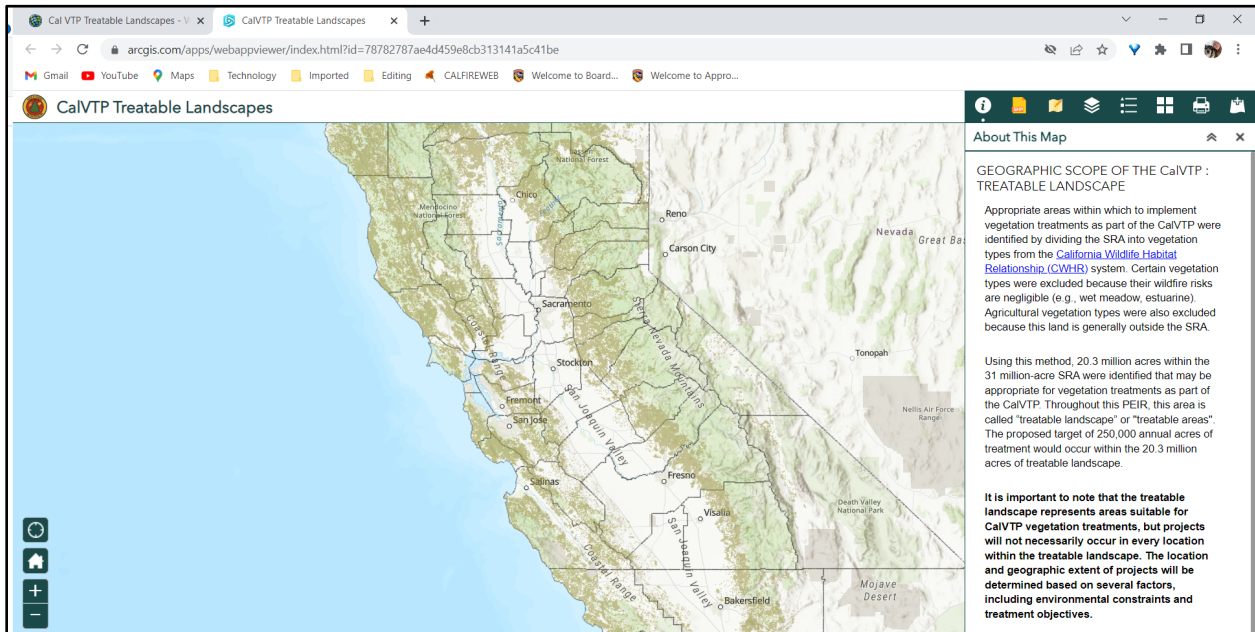


Figure 2. Treatable Landscapes Viewer Web Application.

² <https://www.arcgis.com/home/item.html?id=78782787ae4d459e8cb313141a5c41be>

You may scroll down to read all of the information in the text panel (Figure 3) about the modeling approach utilized to develop the treatable landscape layer.

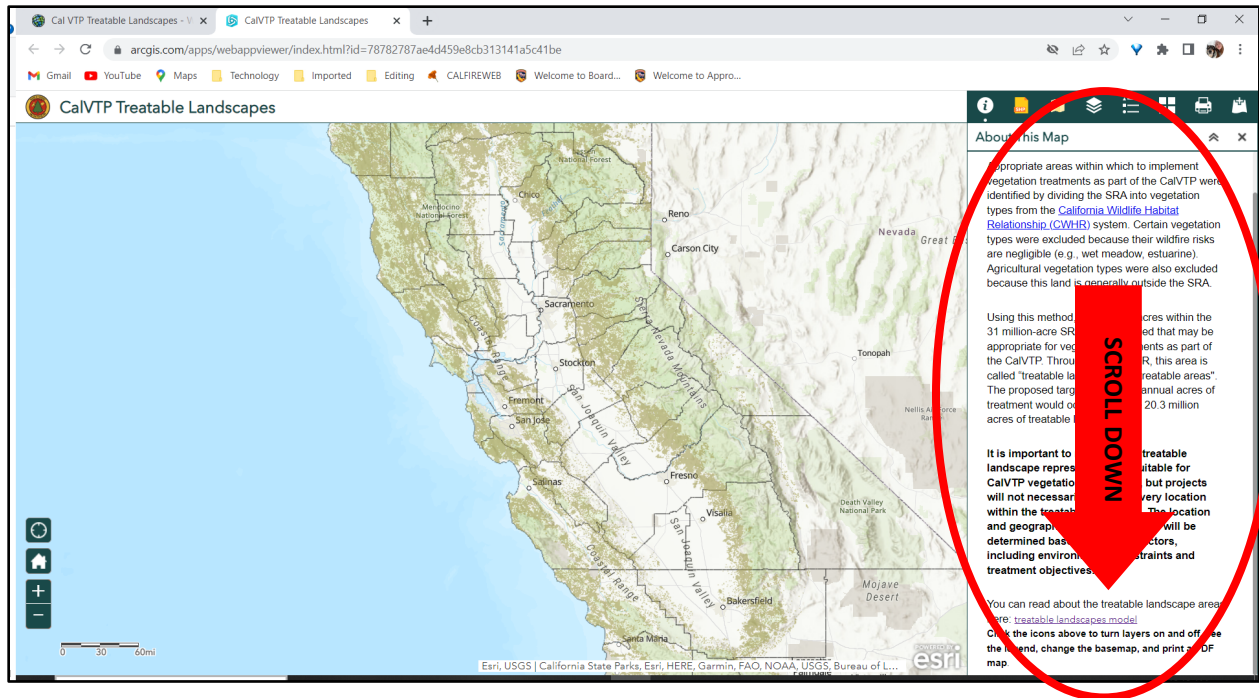



Figure 3. About the Treatable Landscapes Viewer.

The treatable landscape may change over time as land ownership and ecosystems change; keep this in mind, and verify current land ownership when determining the final geographic scope of the treatable landscape for your project. [Appendix PD-1](#)³ in the Final Program EIR provides a description of Treatable Landscape Modeling. Download all Final Program EIR Appendices. 

Step 2: Import Your Project Area

There are **TWO WAYS** to generate the acreage of your project that falls within or outside of the treatable landscape using the interactive Treatable Landscape Calculator tool that is embedded within the Treatable Landscapes Viewer: **1) Uploaded Zipped Shapefile**, or **2) Draw the Polygon** (i.e., the geographic scope of the area that encompasses your Proposed Project).


Method 1 requires a Zipped Polygon Shapefile, while **Method 2** allows you to interactively draw a polygon onto the map. **Method 1** is likely to be more accurate, while **Method 2** will depend on the accuracy of your drawn polygon. Please keep this in mind when interpreting your results. As a reminder, all tools are provided as an informational resource only, and output is not guaranteed to be current or correct.

SEE DESCRIPTIONS OF EACH METHOD BELOW FOR MORE DETAILED GUIDANCE.

³ <https://bof.fire.ca.gov/media/9392/vol-2-apdx-pd-1.pdf>

METHOD 1: Using a Zipped Shapefile

NOTE: This method will only work with a **Zipped Polygon Shapefile**. If your file is not in this format, skip the remaining steps here, and move to “METHOD 2: Draw your Polygon”. If you will use a Zipped Polygon Shapefile, continue here.

- a. Click on the “SHP”  icon in the upper right hand corner of the Tool pane (Figure 4).

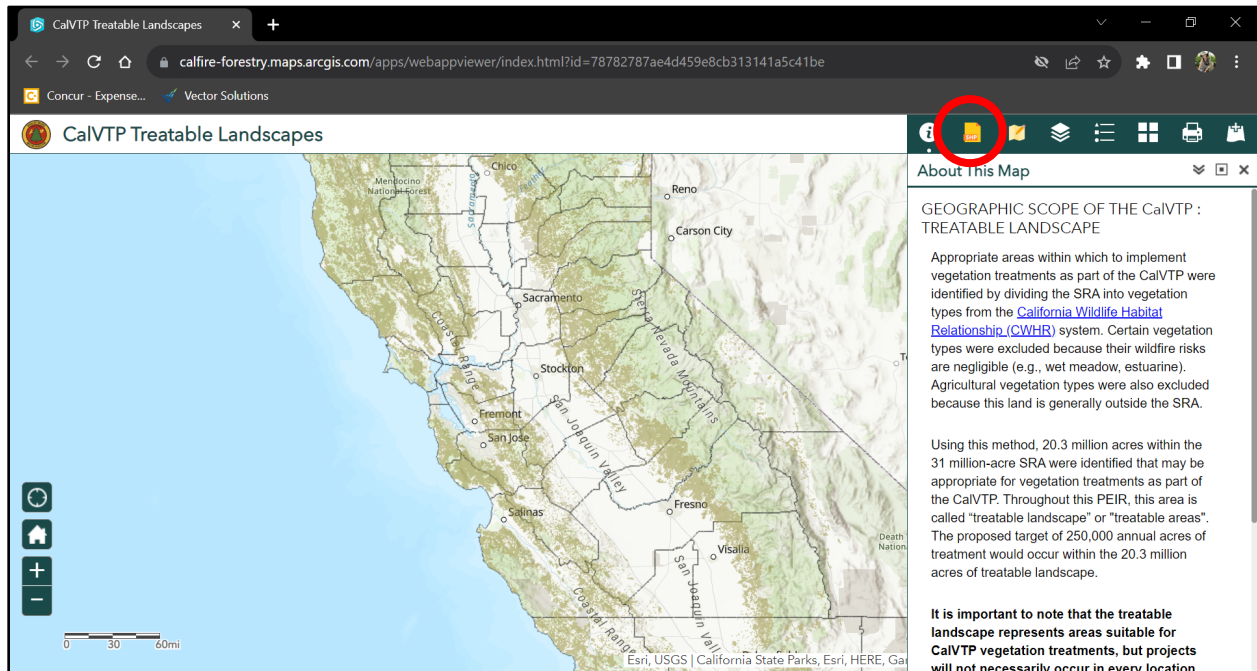


Figure 4. Adding a Shapefile.

- b. A new window opens in the Tool pane showing an “Input” tab, an “Output” tab, instructional text, two operational buttons, and a “Generalize geometries” check box that defaults to ‘checked’.
- c. Click on the “Add Shapefile” button (Figure 5).

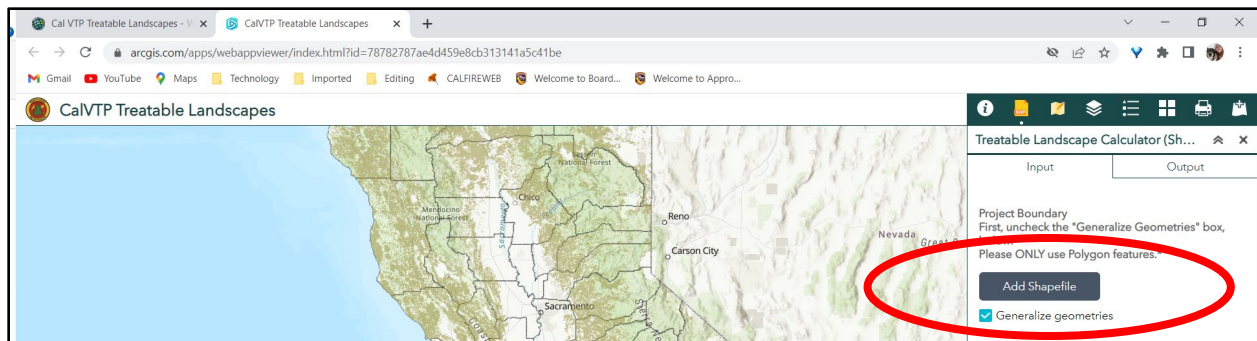


Figure 5. Add Shapefile.

- d. File explorer will open and prompt you to “Add Your File”. Navigate to the location of the Zipped Polygon Shapefile on your computer, and select it by double-clicking, or by selecting the file and clicking on “Open” in your file explorer.
- e. **CRITICAL STEP:** Click on the checkbox to **De-select** “Generalize geometries” (Figure 6).

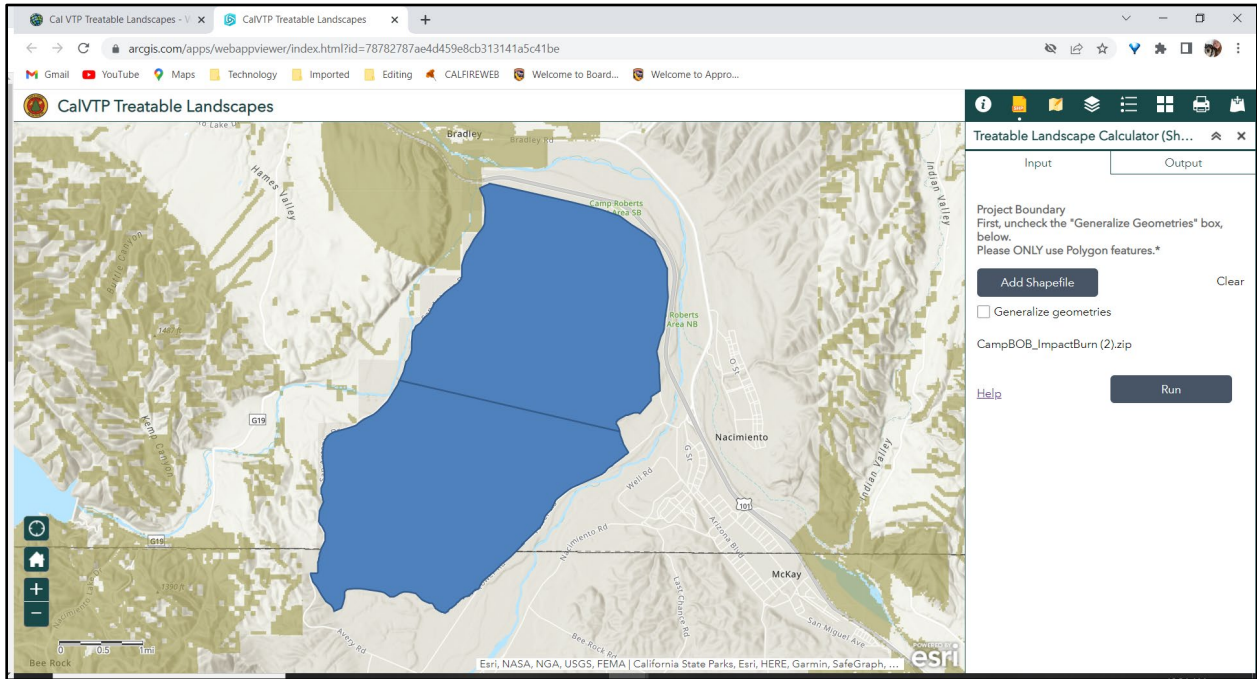


Figure 6. Uncheck 'Generalize geometries'.

REMINDER: This method will only work with a **Zipped Polygon Shapefile**. If your file is not in this format and you cannot obtain a file in this format, skip the remaining steps here, and move to the section on “**METHOD 2: Draw your Polygon**”.

- f. Your Zipped Polygon Shapefile will be added to the tool’s **Input** tab. In the example shown below, the file is called “CampBOB_ImpactBurn (2).zip” (Figure 7).

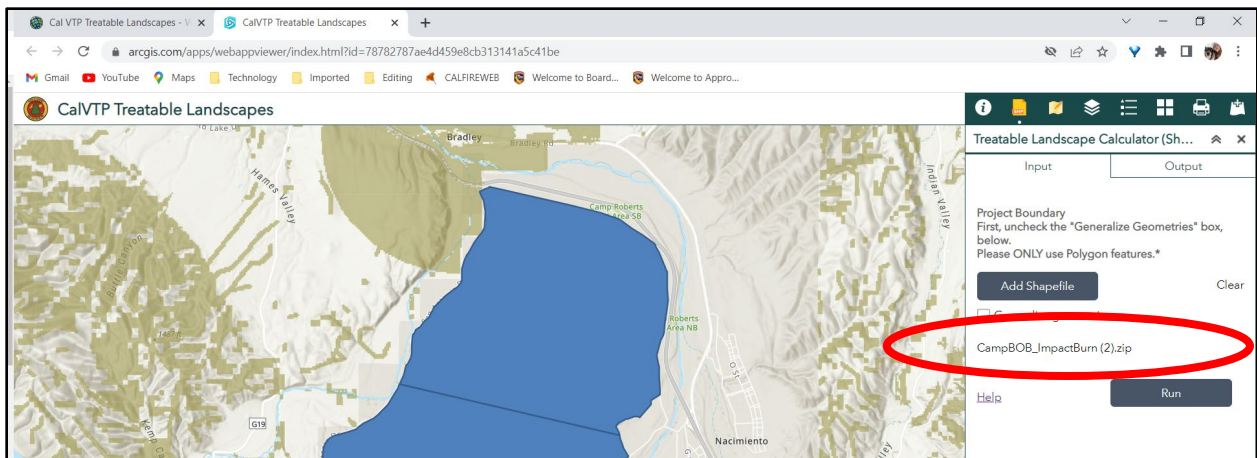


Figure 7. Verify correct shapefile has loaded.

g. Click “Run” (Figure 8).

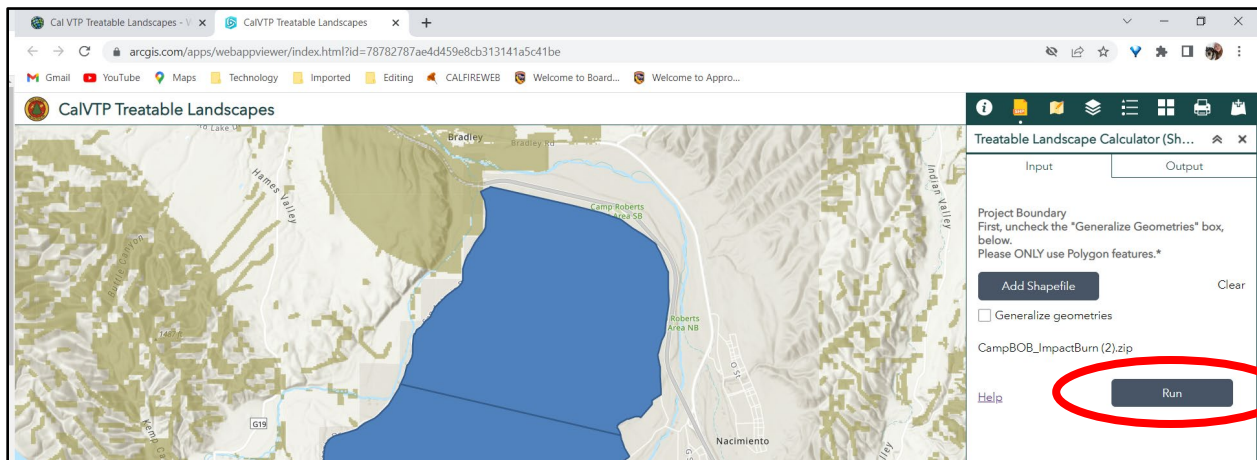


Figure 8. Click Run to execute the tool.

h. The words “Submitted. Executing...” will appear in the Tool pane, and three grey bars undulate in the pane while the tool works (Figure 9). The tool may take several minutes to run, particularly the first time, so allow for at least five minutes to pass, and substantially longer for very large or complex shapefiles. Allow time for the tool to run completely, particularly if you have a slow or unstable internet connection, or if you have a very large file.

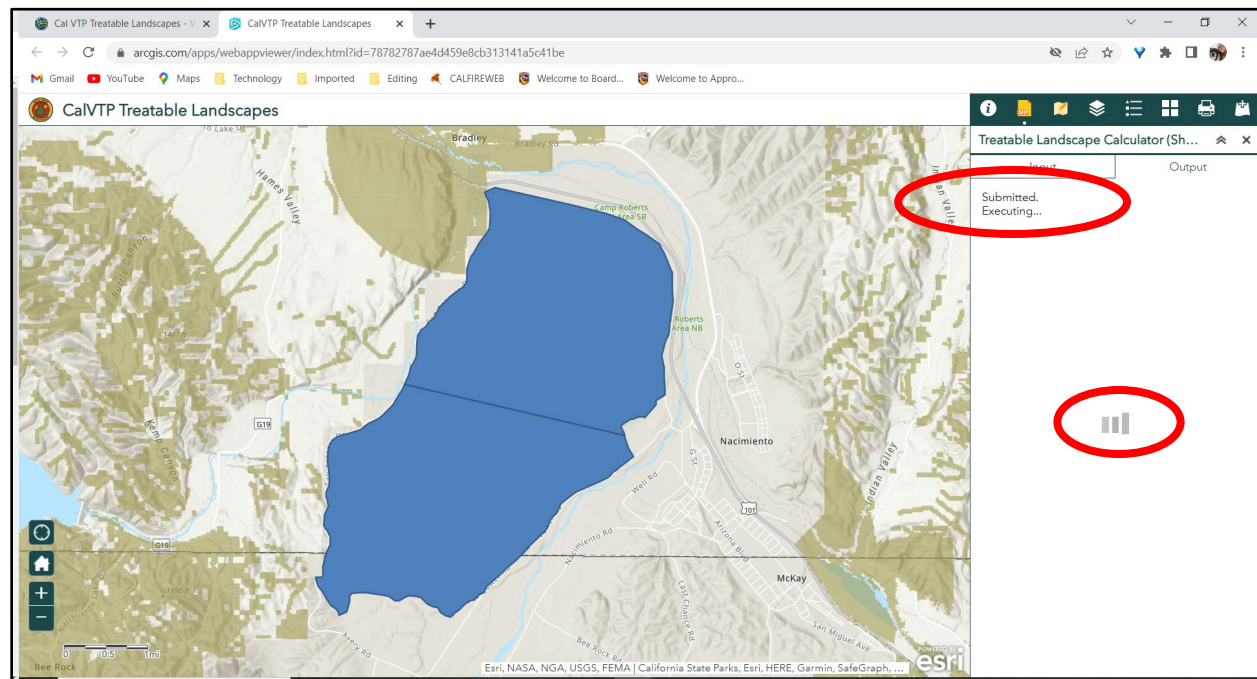


Figure 9. Status bar.

i. **Now Wait:** You may see several lines of orange text appear one at a time, and other grey progress bars may appear briefly in the Tool pane as the results are finalized (Figure 10). Do not click on any other icons while the tool is running.

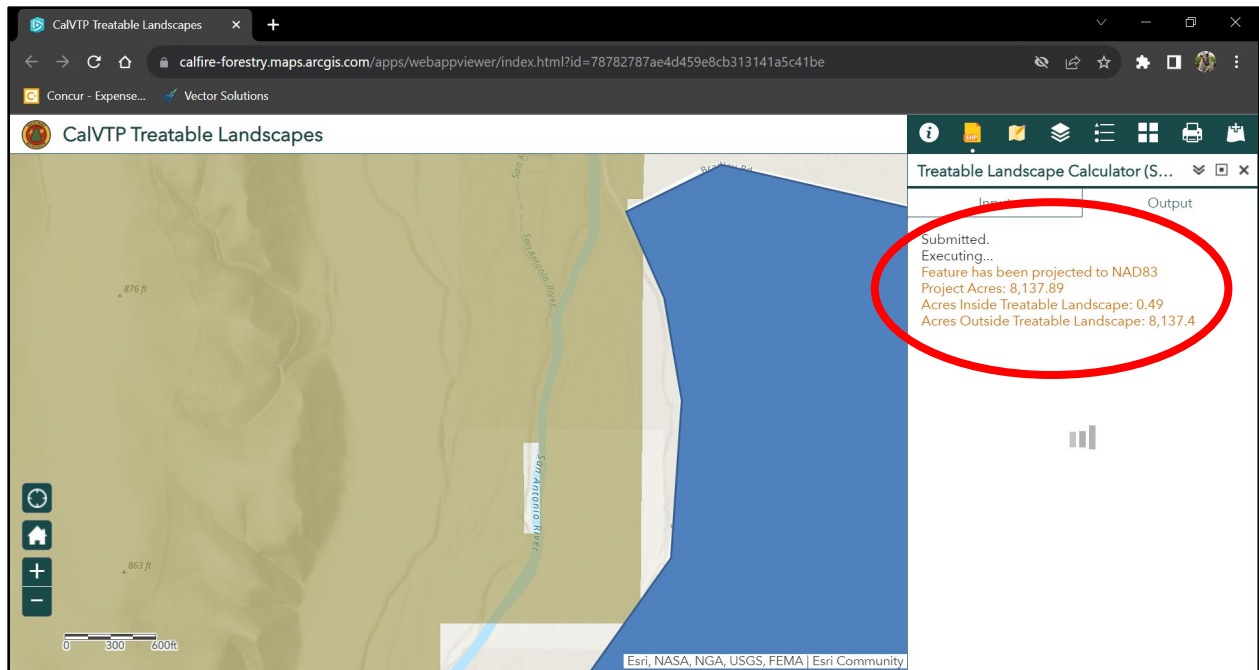


Figure 10. Tool progress.

- j. When the Calculator has completed running, you will see output similar to that shown in Figure 11. The calculator may automatically zoom into the polygon so that you can only view a portion of it. Use the controls on the bottom left of the screen to zoom in or out.

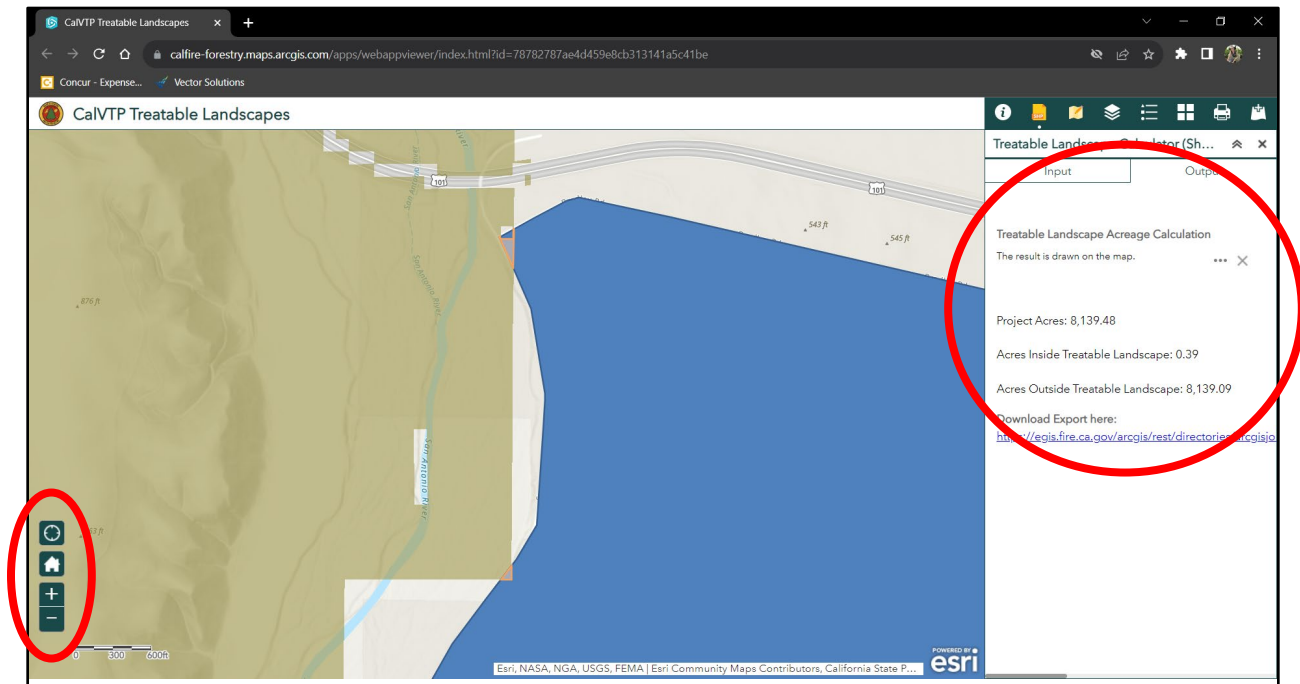


Figure 11. Tool Output.

Note: At this time, the tool does not break down the calculated area Inside or Outside of the Treatable Landscape by Treatment Type (i.e., Fuel Break, Wildland-Urban Interface, or Ecological Restoration) or by Fuel Type (i.e., Grass, Shrub, Tree). While this capability may be added at a later date, this is not currently offered.

Step 3: Save your Data

You have several options to interact with the data at this stage. To obtain the acreage of the total area encompassed by 1) the Project Boundary (including areas proposed for treatment and intermixed areas that are not proposed for treatment but fall inside the Project Boundary); 2) acreage Inside the Treatable Landscape, and 3) acreage Outside the Treatable Landscape, you may:

1. Record the results directly from the output on the Tool pane screen (see Figure 11, above), OR;
2. Click inside the newly generated polygon and results will display in a popup on the map (Figure 12), OR;
3. Click on the link provided under “Download Export here” (Figure 13). This will prompt you to save the resultant Output, which is a Zipped Shapefile containing features for the Acres Inside the Treatable Landscape and Acres Outside the Treatable Landscape, OR;

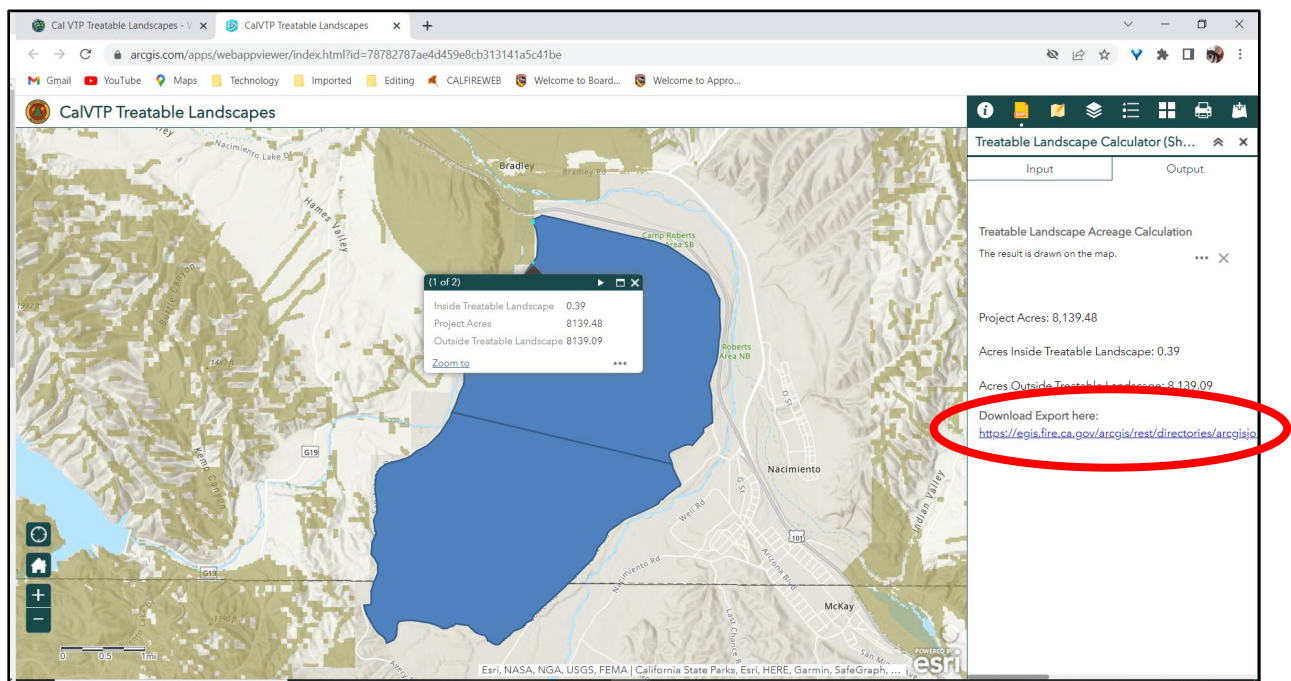


Figure 12. Record or download tool output.

4. Right click the three grey dots to the right of the text “The result is drawn on the map”. This will open up a menu with several options (Figure 13).

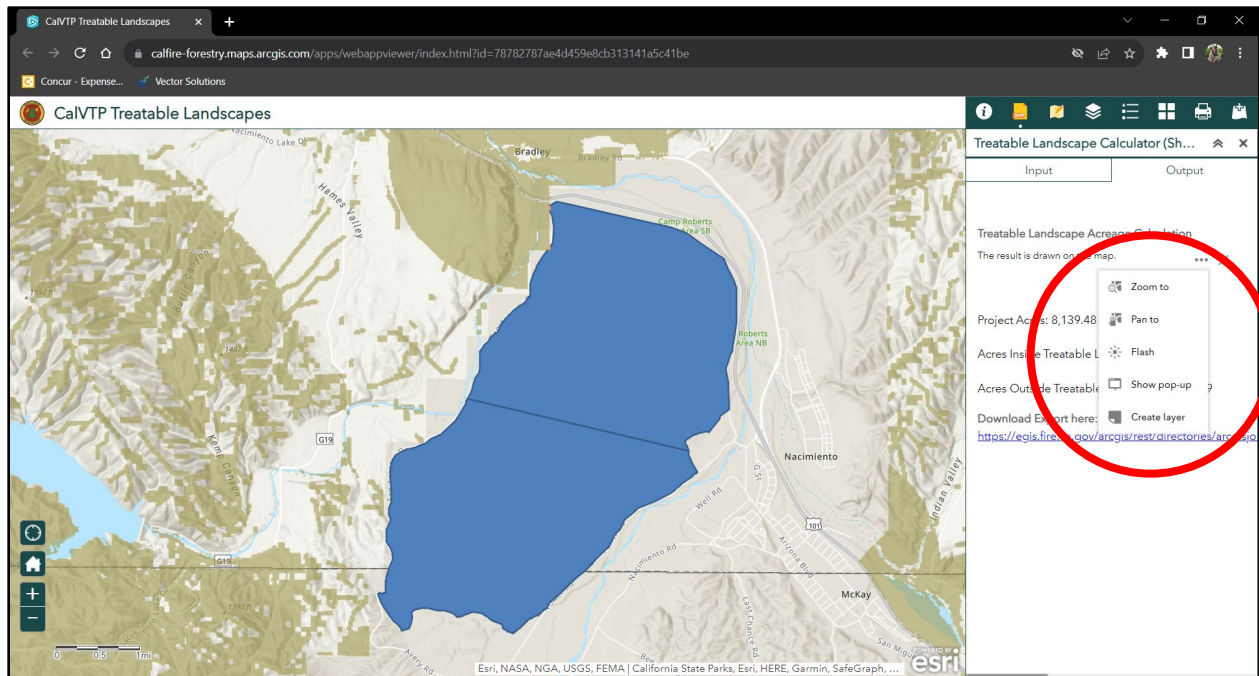



Figure 13. Options.

- **Zoom to:** Zooms to the polygon area that is Inside the Treatable Landscape.
- **Pan to:** Allows you to center the feature on the map by dragging the map with your cursor.
- **Flash:** Highlights the polygon area that is *Inside the Treatable Landscape*; the polygon boundary will flash yellow several times, then stop.
- **Show pop-up:** Brings up a box within the polygon with the same acreage information provided in the tool pane on the right side of the screen. You may accomplish this same thing by clicking on the polygon itself, which will also open the pop-up box.
- **Create layer:** Creates a temporary layer for your generated polygon within the Online Viewer. The tool automatically creates this layer for you and names it “Treatable Landscape Acreage Calculation”, so this is not a necessary step to generate the layer.

METHOD 2: Draw your Polygon

- [Navigate to the Treatable Landscapes Viewer](#), as shown in **Step 1: Go to the CalVTP Treatable Landscapes Web Application**, click the 'View' button to open the Web Application (Figure 1).
- Click on the "Draw"  icon in the upper right hand corner of the Tool pane (Figure 14).

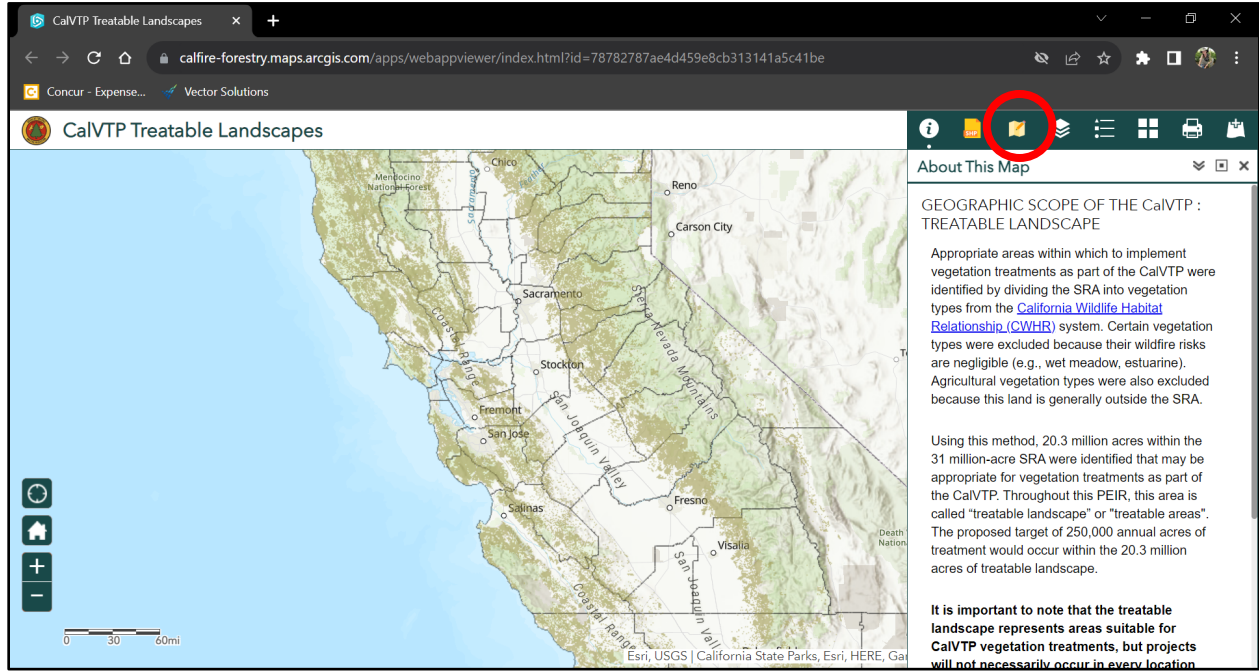


Figure 14. Draw your Project Polygon.

- As with Method 1 (see **METHOD 1: Using a Zipped Shapefile**), a new window opens in the Tool pane showing an "Input" and "Output" tab, but several shape icons will appear instead (Figure 15).

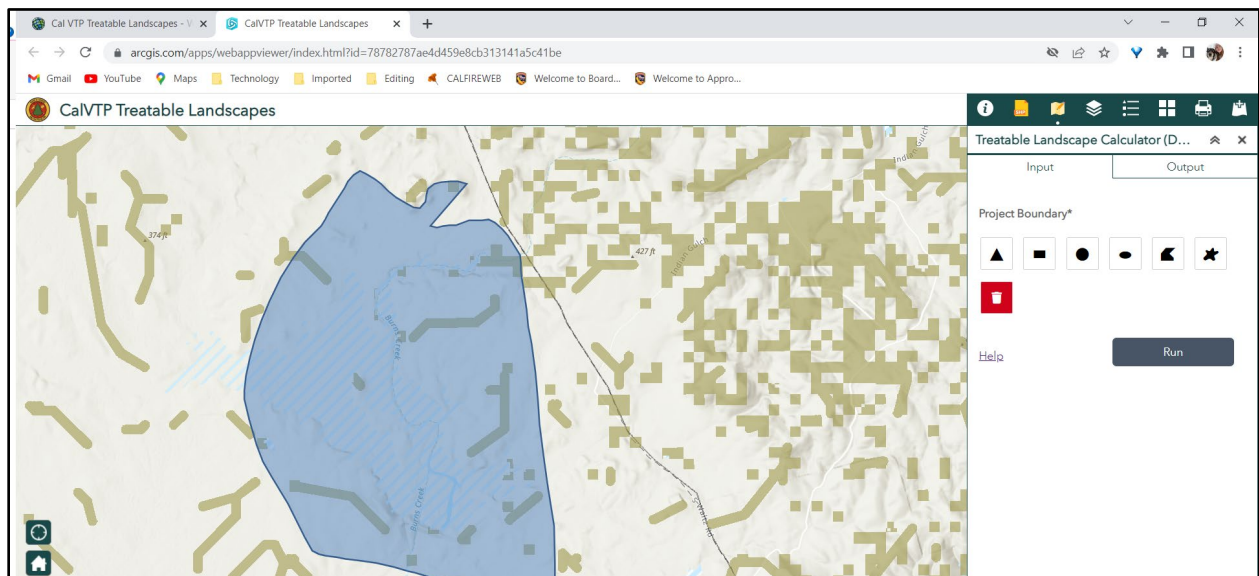


Figure 15. Select polygon shape type, and start drawing your Project Boundary.

- d. Select the shape you would like to utilize to draw your Project Boundary (i.e., the proposed project area in which all Treatment Activities will occur): triangle, rectangle/box, circle/oval, etc. (see Figure 15, above).
- e. You will likely want to zoom into map to your project region to more accurately draw your project boundary on the map. Draw the Project Area shape to the best of your ability. If the project boundary is not accurate, you may click on the trash can to delete your changes and start over.
- f. When you are happy with the polygon you have drawn, click on Run (Figure 16).

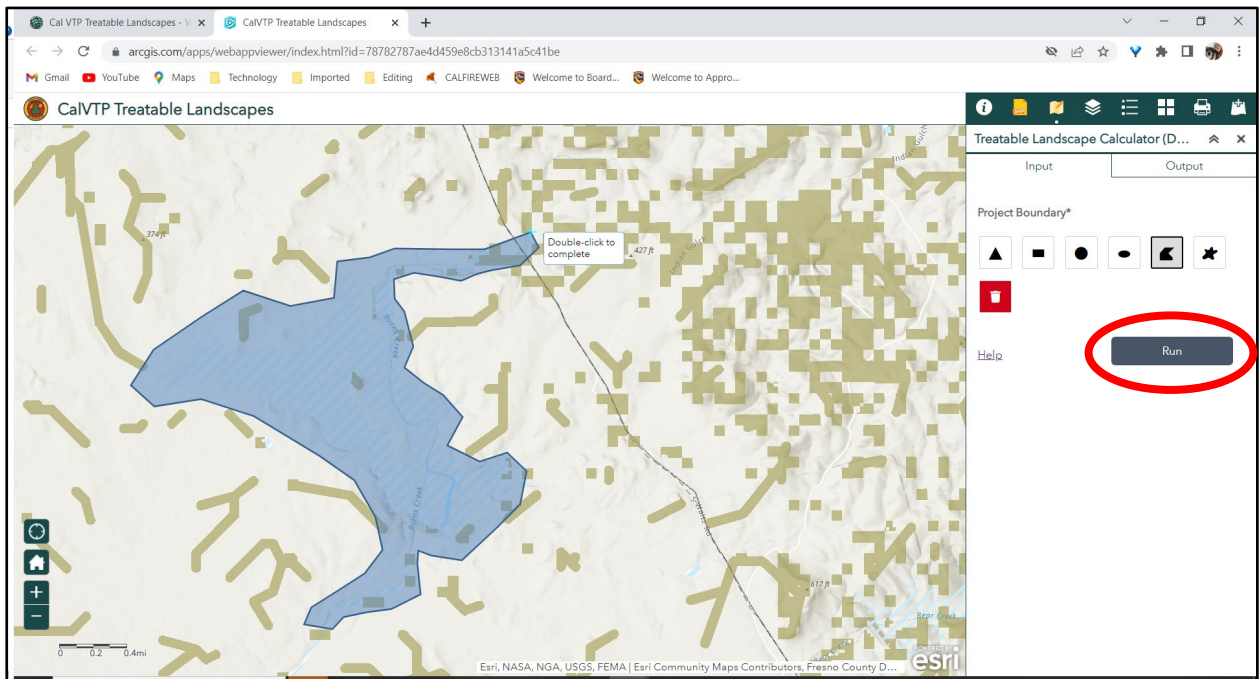


Figure 16. Click on run to execute the tool.

- g. The steps from hereon out are the same as for Method 1 (see **METHOD 1: Using a Zipped Shapefile**, starting at **Step 1-h**).

Questions, Comments, or Concerns

For questions about this tool, contact Board staff to make an appointment to walk through use of this tool on your browser via email at CalVTP@bof.ca.gov or call 916-653-8007. **NOTE:** Updates to this tool may occur at any time, and updates to this User Guide may lag behind tool updates, or vice versa.