Southern Timber Supply Analysis

Case Study — Large Wood Pellet Mill

A global energy provider contacts you regarding the timber supply around Lucedale, Mississippi, where they are considering building a large wood pellet manufacturing facility. In order to meet sustainability guidelines, a certain percentage of round wood they procure must come from first thinnings of pine plantations. Since a portion of this procurement area is National Forest, the company is particularly interested in pine pulpwood inventories on private land. They want your help evaluating the potential supply of first-thinned pine on privately-owned land within 100 miles of Lucedale.

This case study was designed to help users become familiar with the Timber Supply Analysis application. Follow the steps in the exercises below to conduct a preliminary feasibility analysis for pine pulpwood supply for this mill.

To begin, open the application by browsing to http://southerntimbersupply.com.

Exercise 1: Define supply area and explore existing mills

1. Click **Evaluate Supply Potential** in the left panel.

2. Your mill expects to source pine pulpwood from a 100-mile radius, so in **Step 1**, keep **Radius (miles)** selected and choose **100 miles** in the dropdown menu.

3. In **Step 2**, click in the **Find address or place** box and type "Lucedale, MS". Select Lucedale from the list that appears or hit enter to complete the search. The application will automatically use the result to define your point of interest.
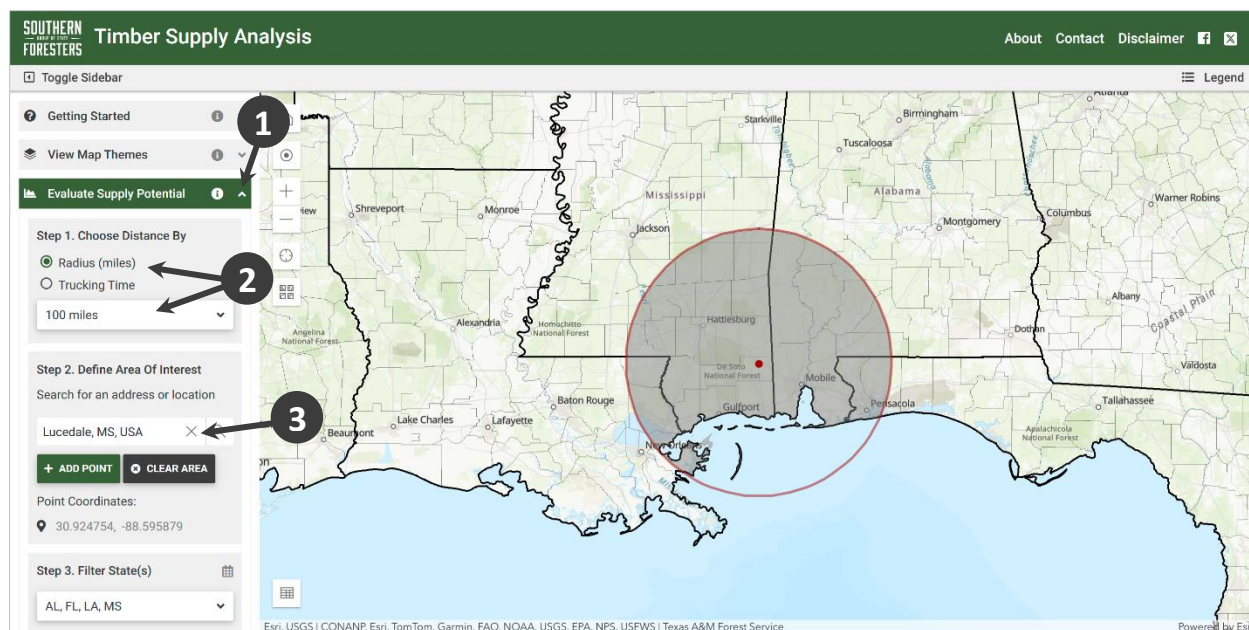
4. Click **View Map Themes** in the left panel.

5. Check the box next to **Mill Locations** to turn on the mill layer.

6. Click the supply circle icon on the map to zoom closer to your supply area.

7. Click **Legend** on the right end of the gray toolbar to open the map legend.
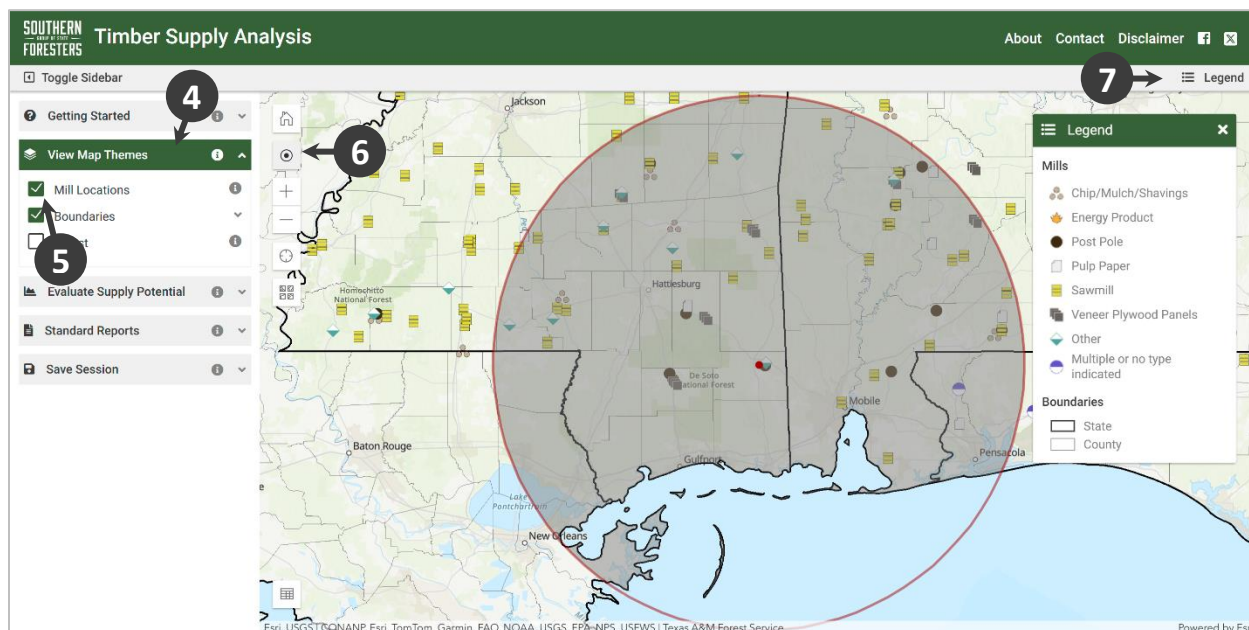
Available mill symbols (obtained from the Primary Forest Products Network) are now shown on the map, and the key for the symbols appears in the legend. You can click on a mill icon on the map for more information about a particular mill. Use the map to answer the following question.

Note: Mill data from Louisiana is not represented in the Primary Forests Products Network.

Question 1: How many energy product mills exist inside of the proposed procurement area? _____

Exercise 2: Define parameters and calculate supply statistics

1. Return to **Evaluate Supply Potential** in the left panel (you can turn the mill layer off and close the legend if desired). Click the information icon (ⓘ) next to **Evaluate Supply Potential** to find out more about the estimates and parameters.

2. Read the information in the box, and then click the link to **More information about the data**. This opens another tab with detailed information about the data.

Use the information on the **Evaluate Supply Potential Statistics** page to answer the following questions.

Question 2: What diameter trees are included in softwood pulpwood volume estimates? _____

Question 3: Are the reported weights green or dry weights? _____

Question 4: Do the reported weights exclude bark? _____

Question 5: What is the stump height and minimum top diameter for pulpwood? _____

Question 6: When was the data in the application downloaded from the Forest Inventory and Analysis Datamart? _____

When finished, close the **Evaluate Supply Potential Statistics** tab in your browser and return to the main application window.

3. Steps 1 and 2 are already completed from Exercise 1. **Step 3** allows you to select which states to use for your analysis if your supply area overlaps more than one state. Keep Alabama, Florida, Louisiana, and Mississippi selected for this analysis.

4. In **Step 4**, you can choose whether to include only private land, only public land, or both. In this case, we're interested in privately-owned timber, so select **Private** from the dropdown menu.

5. Finally, in **Step 5**, you can choose whether to display the results by volume (cubic feet and board feet) or weight (tons). For this analysis, we are interested in weight, so click "Weight" to select that option. To generate the results, click the **Summary Statistics** button.
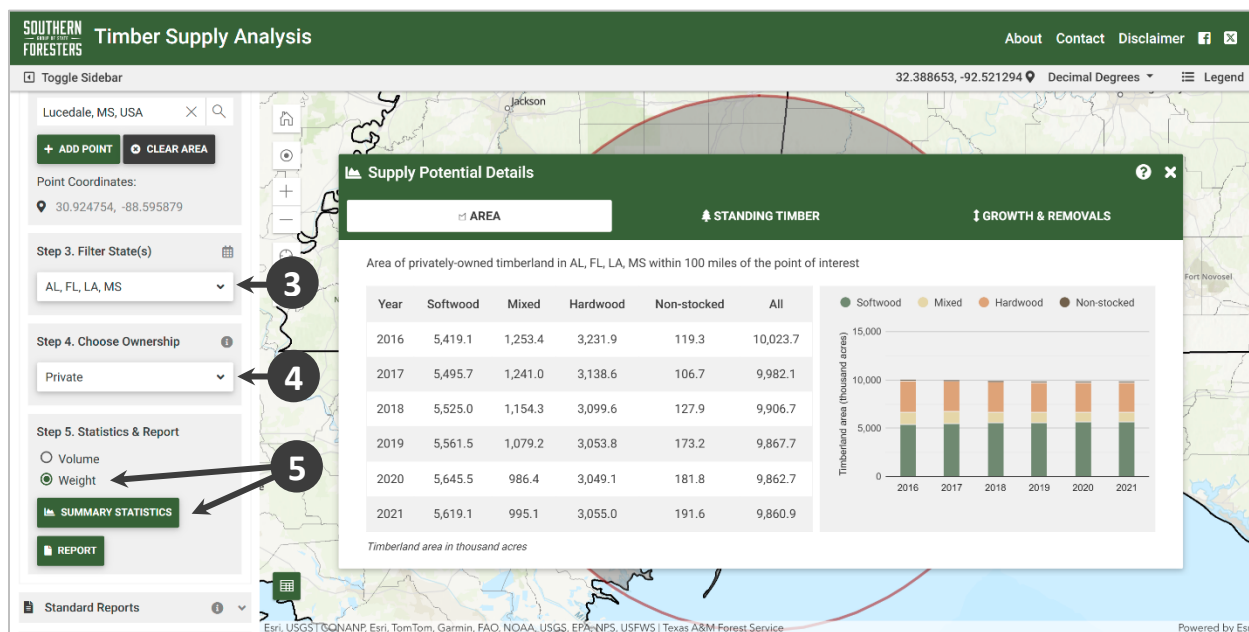
A box with statistics for the supply area opens. The question mark icon in the upper right corner of the box opens the "*Evaluate Supply Potential Statistics*" page you reviewed earlier. Use the information in the **Supply Potential Details** box to answer the following questions. The default view is timberland area – click on the tabs at the top to switch views. In **Standing Timber** and **Growth & Removals**, you can toggle between **All Live**, **Pulpwood**, and **Sawtimber** in the gray bar that appears. **Pulpwood** and **Sawtimber** in **Standing Timber** have additional tables and charts below the main one that you can expand to see more detail.

Question 7: How many acres of privately-owned timberland were classified as softwood in 2016? _____

Question 8: How many green short tons of softwood pulpwood were standing in this procurement area in 2016? _____

Question 9: What is the growth to removals ratio of softwood pulpwood in this area (hint: switch to **Growth & Removals** and click **Pulpwood**)? _____

Note: Softwood is not limited to pine species. Cypress and eastern redcedar may also contribute to the estimates, though the vast majority of softwood supply in this area is pine.

If your analysis criteria includes multiple states, the application will use the most recent data commonly available to all selected states at time of download. If you are primarily interested in one state, you may want to restrict your analysis to that state to ensure you're using the most recent data available for that state.

Exercise 3: Generate PDF report

1. Carrying over all the parameters from Exercises 1 and 2, click the **Report** button to generate a PDF report containing all the supply statistics for your analysis area.

The report will open in a new tab in your browser. If you don't see it appear after the wheel stops spinning, check that your browser didn't block the pop-up. Use your browser tools to save the PDF as a file on your device.

Help

Scroll to the next page to see the results for this case study.

If you have questions about the application, please refer to the **Getting Started** tour and the info icons (ⓘ) on the toolboxes. There are also other case study exercises you can complete. If you have a question or experience a problem not covered by these resources, please submit feedback and questions through the Contact link in the top right corner of the application.

A saved session of this case study is available at texasforestinfo.tamu.edu/tsa/?session=casestudy3.

Answers

1. 0
2. DBH 5.0 – 8.9 inches
3. Green
4. No
5. 1 foot; 4 inches outside bark
6. 12/16/2024
7. 5.4 million acres
8. 70.8 million green tons
9. 1.4