Southern Timber Supply Analysis

Case Study — Large Pine Sawmill

You receive a call from a group of investors wanting to know the feasibility of opening a new mill in Lufkin, Texas. They are proposing a state-of-the-art, large pine sawmill capable of producing 150 million board feet of dimensional lumber per year. The group plans to procure sawtimber from private landowners within 100 miles of the mill site. Before they start their environmental assessments, they want to make sure there is enough wood available for this new venture and are asking for your help.

This case study was designed to help users become familiar with the Timber Supply Analysis application. Follow the steps in the following exercises to conduct a preliminary feasibility analysis for the proposed 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 sawtimber 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 "Lufkin, TX". Select Lufkin 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.

    Note that the 100-mile radius (red boundary) extends outside of the available data area – only the portion shaded in gray will be included in the analysis by default. If you want to include data from Central/West Texas, make sure to select Texas (West) in *Step 3: Filter State*. This analysis will use common data years from the two regions, and may not include the most recent data from East Texas.

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.
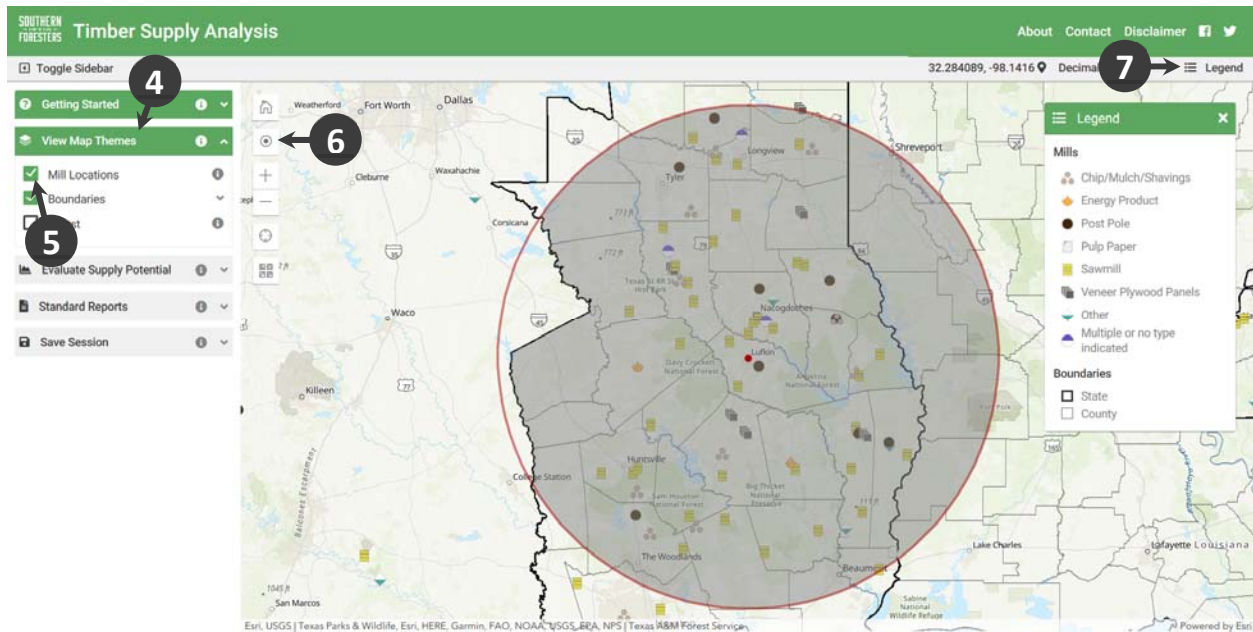
Available mill symbols (obtained from the Primary Forest Products Network) are now shown on the map, and the key for the symbols appears in the legend. You can click on a mill icon on the map for more information about a particular mill. Use the map to answer the following question.

Question 1: How many existing sawmills are located in the same county as your proposed mill (hint: counties are displayed by default with a gray boundary; you can turn them on and off under **Boundaries** in **View Map Themes**)? _____

Exercise 2: Define parameters and calculate supply statistics

1. Return to **Evaluate Supply Potential** in the left panel (you can turn the mill layer back off and close the legend first if you want to). 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 sawtimber volume estimates? _____

Question 3: What is the minimum top diameter for softwood sawtimber? _____

Question 4: What is the diameter cutoff between small and large softwood for sawtimber volume estimates? _____

Question 5: 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 both Louisiana and Texas (East) selected for this analysis. The calendar icon links to a table that shows the most recent data year available for the states.

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 primarily in board footage of sawtimber, so keep volume selected. The last step is to 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 used 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 6: How much privately-owned timberland was in the analysis area in the latest year of data? _____

Question 7: How much of the timberland in Question 6 is a softwood forest type? _____

Question 8: How many board feet of softwood sawtimber were in the most recent inventory (hint: switch to **Standing Timber** and click **Sawtimber**; expand the **Softwood Size** bar below the main table and chart)? _____ small softwood? _____ large softwood? _____

Question 9: What is the growth to removals ratio of softwood sawtimber (hint: switch to **Growth & Removals** and click **Sawtimber**)? _____

Question 10: Is there excess softwood sawtimber growth? _____ If so, how much, and is it enough to sustainably supply a 150 million board foot capacity sawmill? _____

Note: Softwood is not limited to pine species; in the supply area for this case study, eastern redcedar and baldcypress are also present, but the vast majority of the softwood supply 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 (see Question 5). 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=casestudy1.

Answers

1. 2
2. DBH ≥ 9.0 inches
3. 7.0 inches
4. 11.0 inches DBH is large softwood
5. 12/8/18
6. 11.1 million acres
7. 5.7 million acres
8. 5.4 billion board feet; 30.5 billion board feet
9. 1.14
10. Yes; 269.7 million board feet; Yes