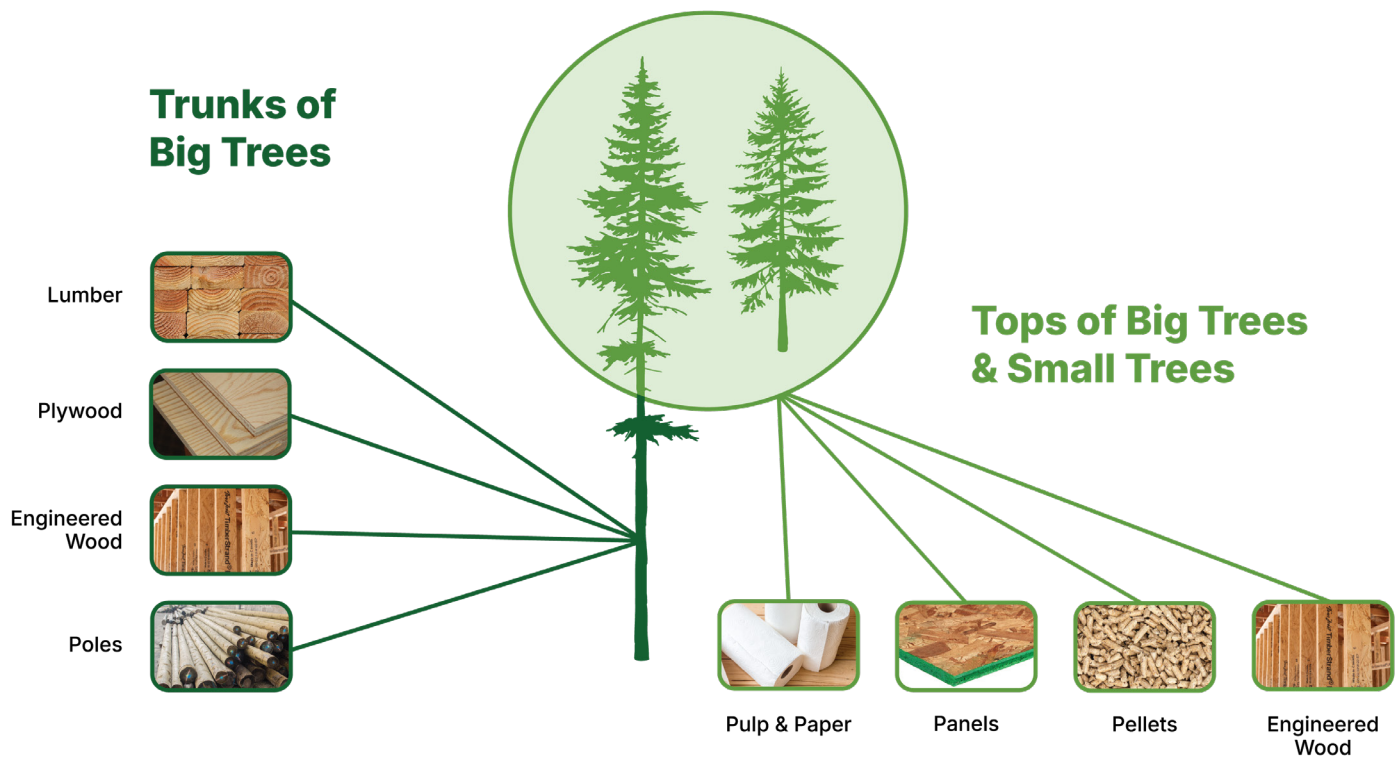


# HOW WE DO IT: Making the Most Of Every Tree We Harvest



Weyerhaeuser has grown, harvested and replanted trees for more than 100 years. We were among the first in our industry to embrace and develop sustainable forest management practices, and as stewards of millions of acres of North American timberlands, we have a responsibility to maximize the value and benefits of every tree we harvest. To fulfill that obligation, we use nearly every part of the tree, including by-products from the production of wood products.

While geography and environment determine the species of trees we grow and how long it takes those trees to reach maturity, our primary goal is to grow large, straight trees that can be turned into logs for solid lumber, wood panels and engineered wood products that are used to build residential homes. But, for a variety of reasons, not every part of the trees we harvest can be used in our manufacturing facilities. Smaller trees and treetops, as well as by-products from our mills such as wood chips, shavings and sawdust, are collected and used by us or by our customers to make other products that are essential to everyday life, including paper, packaging and tissue, as well as wood pellets that provide renewable bioenergy.



## KEY POINTS

- We make the most of every tree we cut.**

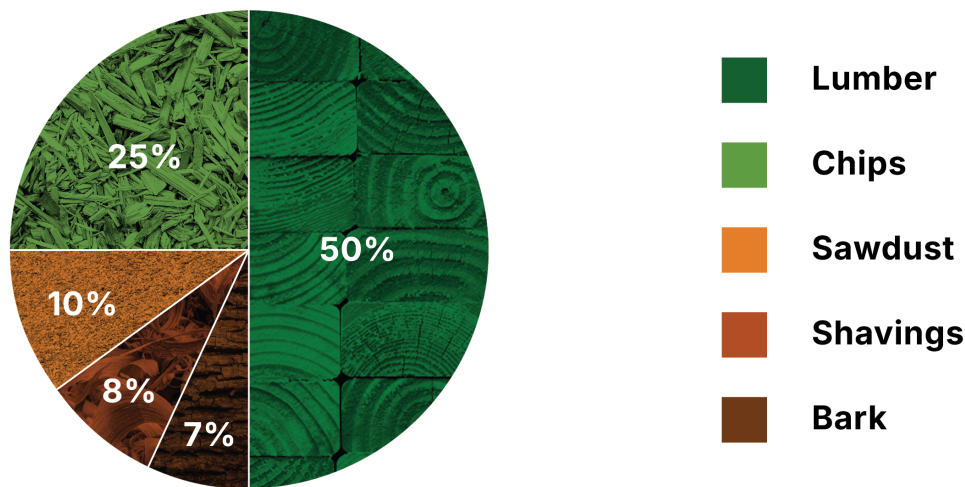
We use nearly every part of every tree we harvest, and we always direct harvested logs and fiber to their highest-value use. Large sawlogs from mature trees are most valuable and are used to make products such as utility poles, lumber and veneer. The tops of those trees, as well as smaller trees from thinning operations, are used to make products such as engineered wood products, oriented strand board, panels, pellets and pulp and paper. Often, these logs and tree parts are sent to one of our mills. Other times, they are sold to other manufacturers. But no matter where they end up, we work to find the best use for each tree we harvest. However, variations in regional markets can impact where we send logs and how they are used. In the forest, we leave limbs and non-marketable logs on the ground to stabilize and improve the soil and prevent erosion after harvests. This woody debris also contributes to habitat for different species and decomposes over time to fertilize the soil. Over the years, we've made significant progress in finding productive uses for all sizes and types of harvested trees.

- **We maximize recovery at our mills.**

To maintain our operational and wood utilization efficiency, we work hard to ensure that the logs we bring into our mills from our own forests or from suppliers are within the ideal size ranges for manufacturing. A lumber mill, for example, might receive larger sawlogs with diameters around 2 feet, while an OSB plant might receive smaller logs with diameters of 10 to 12 inches. We use computer-scanning tools to precisely determine the highest-value cut pattern for each log as it enters the mill and to efficiently trim and cut products during the manufacturing process. Both approaches are important and work together to maximize the amount and value of the wood products we produce from any given log or fiber source.

## Turning Logs into Useful Products

What becomes of a log at a lumber mill on average



*Approximately half of every log that arrives at one of our sawmills becomes lumber. The above chart shows an average breakdown across regions. Because lumber mills produce rectangular boards from round logs, they generate more by-products than oriented strand board or engineered wood products facilities.*

- **We find beneficial uses for our mill by-products.**

We always try to maximize the conversion of logs into our primary products (e.g., lumber, panels, etc.). However, making mostly square or rectangular boards out of round logs inevitably generates by-products such as bark, sawdust, chips and shavings. We use many of these by-products as fuel in our own wood products facilities. This fuel helps generate heat for processes such as drying lumber and curing plywood. Using our own by-products in this way minimizes waste and ensures that we have a steady supply of renewable energy. In fact, we meet more than two-thirds of our own energy needs using by-products as fuel. By-products we don't use are sold for their best and highest-value use. Most end up on the market as landscaping mulch, animal bedding, natural fertilizers or are used to make pulp, paper and/or fuel pellets. Our approach allows us to use about 99 percent of our wood by-products to create other products or to generate energy.

## FREQUENTLY ASKED QUESTIONS

### What happens to the parts of trees that are left on the forest floor after harvest operations (e.g., limbs, branches, chunks, etc.)?

In many cases, we use these harvest residuals to help mitigate soil erosion in areas where logs were dragged or in areas of exposed soil. Small branches, needles and leaves act as a "filter" for surface water moving across the ground. These harvest residuals also slow the flow of water, which helps prevent erosion and sediment movement. Additionally, extra harvest residuals

can be gathered into piles, which create great habitat for small animals. We may burn these piles to reduce fuel loading in fire-prone areas or to help create planting areas to support reforestation efforts. Strong markets for smaller trees and tree parts can provide additional opportunities for surplus wood material available after these vital functions have been served, supporting the efficient use of the harvested trees.

### **Do logs and by-products have “expiration” dates – i.e., how soon do they need to be turned into a useful product before degrading or decaying?**

Trees naturally begin to decay once harvested, so to produce the highest-quality wood products, it's generally preferred to process the logs soon after harvest — or in the case of by-products, to use them soon after they are generated. Depending on size, species and environmental factors, logs may be stored in a log yard for several months without serious impact on quality, while by-products tend to have a much shorter life span, typically a few weeks.

### **How do you ensure your logs come from legal and responsibly managed sources?**

Across our wood products manufacturing facilities, we certify all our sites to either the Sustainable Forestry Initiative® (SFI) Fiber Sourcing or Certified Sourcing standards. These certifications require that we verify whether our wood originates from a certified or non-certified land base and influence the practices taking place on those lands. All our timberlands are certified to the SFI® Forest Management standard. For wood that we procure from non-certified lands — because for many small landowners the cost of certification is prohibitive — the Fiber Sourcing standard helps us:

- Collect and confirm the location of origin (e.g., county or municipality) for all wood we procure.
- Assess the risk of procuring wood from controversial sources and implement mitigation action where risk is identified.

On average, we source 40 percent of the wood used to make our products from our own SFI-certified forests, with the remainder coming from other certified landowners, our SFI-certified Canadian managed lands, or from noncertified landowners — typically small, family-owned forests.<sup>1</sup>

### **How does the use of by-products in your manufacturing facilities impact energy needs?**

Without by-products, we would have to rely far more on fossil fuels to power our mills. By-products are plentiful and provide us with a steady, predictable supply of fuel to make renewable energy. In fact, today we meet more than two-thirds of the energy needs in our manufacturing facilities by using renewable biomass.

<sup>1</sup>Weyerhaeuser ESG Data Table: [Wood and Fiber Supply Chain Sustainability](#)

