# **Wood Fiber Resources**



Enviva sources its raw materials through suppliers who deliver fiber from privately-owned forests and directly from sawmills and other wood industry manufacturers.

Enviva does not source from primary forests, protected forests or forests that are being harvested for land use conversion. The ratios of hardwood to softwood, species mix, and fiber forms (tops/limbs vs. chips vs. sawdust, etc.) vary depending on the plant and the region.

## Wood fiber procured by Enviva falls into the categories below:



# Low grade wood fiber

Wood that would otherwise be rejected from lumber mills. This wood does not meet specification for higher-value uses. Characteristics which preclude processing by other mills can include:

- Rotten/hollow core
- Bad grain/excessive knotting
- Crooked stem and form
- Diseased or damaged
- Fire/lightning damage
- Small size



#### **Tops and limbs**

Parts of the tree that cannot be refined into lumber. Some "tops" of trees can be significant in size and are often mistaken as a "whole tree." These tops and limbs are the unusable by-products of a sawtimber harvest.



Without demand, this fiber would most likely be left on the forest floor, releasing carbon through decomposition and impeding reforestation.



#### "In-woods" chips

Chips made by suppliers in the forest out of low grade wood and waste materials that are left over after a primary harvest. These consist of small tops and limbs, vines and other woody debris. This debris would otherwise be left on the forest floor, releasing carbon through decomposition and impeding reforestation.



## **Commercial thinnings**

Commercial softwood plantations are generally thinned once or twice before the final harvest. This common forestry practice ensures the healthy growth of high-value timber.

- A first thinning generally occurs between 10 and 20 years of age. Generally weaker or deformed trees are removed to reduce competition for water, nutrients and sunlight.
- A second thinning may occur 7-15 years later, to remove any additional trees that have developed defects or additional understory and to concentrate growth on highest quality trees.



## Mill waste and residues

Wood chips and sawdust from other types of mills, primarily sawmills. These chips and dust are created during the processing of higher value lumber and would otherwise be disposed of as waste.