



How does forest management affect forest carbon?

Harvesting trees for lumber, veneer, firewood, chips, or pulp removes carbon from the forest, but as long as the forest is allowed to remain a forest, other trees will quickly occupy the newly created space and sequester carbon from the atmosphere as they grow, sometimes at an accelerated rate. This happens naturally in northeastern forests where tree planting is not necessary due to natural regeneration of trees when an area is harvested. Creating gaps in the forest emulates natural processes and allows young trees to have sufficient sunlight and space to grow. Thinning immature forests to remove trees that would otherwise die due to self-thinning (competition) with other stems, increases growth rates of the best, most vigorous trees.

Harvested wood products

If harvested wood is used for long-lived products, like lumber for buildings, furniture, or flooring, the carbon remains in the product for its life. There are thousands of houses in the northeast that contain carbon that was sequestered by trees hundreds of years ago. Eventually, the wood in our furniture and homes may be discarded or put into a landfill, where it will continue to store carbon for many years, and even decades.

Additional carbon benefits can come from using wood products as a substitute for concrete, steel, or fossil fuels, thus avoiding emissions from the extraction, transport and manufacture of these high-intensity products. The advent of mass timber products and tall wood buildings provide increased opportunities to store greater amounts of carbon while replacing more malignant construction materials.

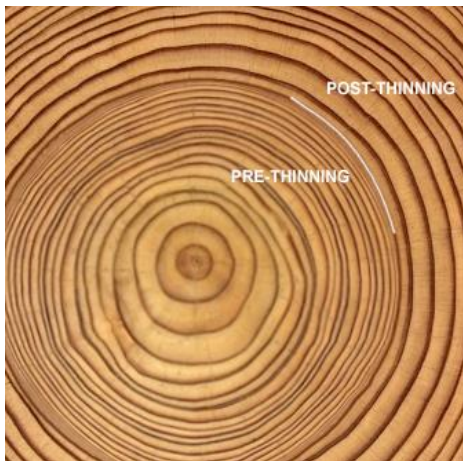


Figure 1 Source: oregonforests.org

Active forest management can help improve forest health and accelerate tree growth (Figure 12). As young forests grow, many trees will die naturally as the result of competition. Harvesting trees that are poorly formed, overtopped, or show signs of decline, can help invigorate growth of the trees left to grow. Additionally, by thinning out trees of poor form and health, and growing trees that are healthy and straight, increases the likelihood that those trees can produce future sawlogs that can be sawed into durable wood products, which continue to store carbon in use and in landfills for decades.

Forest management can also help move carbon from living biomass to the dead wood, litter, and soil pools. Dead wood is particularly important in water and nutrient cycling, providing food and habitat for insects, mushrooms, and wildlife, and protecting young trees.